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ABSTRACT

Program goals, designs, and accomplishments in the area of second-step nursing education is the topic of this report of a conference attended by over 125 nursing educators, administrators, and graduate students. (Second-step nursing education encompasses postlicensure upper-division baccalaureate programs expressly designed for registered nurses.) The texts of two guest presentations (on curricular implications of the second-step concept and the uses of research) as well as fourteen reports in five areas are provided. An overview of the National Second Step Project (NSSP) is given in a series of four reports on NSSP development, program goals, concepts for nursing research, and program graduates and careers. Establishment reaction to the second-step model is discussed in reports on the integration of a professional nursing program into a liberal arts college and on four-year program administrator views on articulated curricula. Three program evaluation designs are outlined. Research perspectives on student entry and placement are examined in two reports on tests for incoming student assessment and assessing clinical competence. In the final section on utilizing research on program development, two reports consider individualized instruction and the effect of prior nursing experience on first-term performance in a second-step program. (MN)

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VOLUME I.

PROCEEDINGS

RESEARCHING SECOND STEP NURSING EDUCATION

First Annual Conference

January 14-15, 1980

San Francisco, California

Katherine L. Jako, Editor

Sonoma State University
Rohnert Park, California

National Second Step Project
Department of Nursing

March 1980

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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PREFACE

Although the *idea* of post-licensure upper-division baccalaureate programs expressly designed for registered nurses had been taking shape since the turbulent Sixties, actual planning for the first accredited Second Step program in nursing education began in northern California in the fall of 1971. The climate in higher education was, in those days, receptive to innovation and open curriculum models. Spurred on by demands for more adequate health care delivery systems, stimulated by strivings of nurses for professional status, legitimized by governmental financing, and not unrelated to the rise of the women's movement, the idea became a reality at Sonoma State, a small university at the northern edge of the San Francisco Bay Area.

Almost a decade has passed since then--years during which both the idea and the reality have flourished all across the nation. But the proliferation of such programs, which can now quite properly be termed a movement of major proportions in nursing education, took place for many of those years in an atmosphere charged with controversy. Only recently, as the political battles subside in intensity, have we begun to view the Second Step phenomenon through the window of empirical research, and to make sense of our observations.

What we see is an eclectic array of young programs, all sharing this unique focus upon the registered nurse student, but each finding its own way through an oft-repeated labyrith: the circumstances and posture of the parent institution, how to procure adequate start-up funds, the search for an appropriate faculty, the need to develop a sound curriculum based on a coherent philosophy and reasonable objectives, pressures to define and recruit the "right" student body, accreditation criteria of the professional societies, and, finally, devising ways of maintaining creativity after the thrill of getting started is past. In this process, the same wheel has doubtless been invented many times over, often in splendid isolation.

Research has played an important role in the development and evaluation of many individual Second Step programs; but researchers, too, have often designed their studies and pursued their inquiries without the benefit of fruitful dialogue. Hampered by being outside the mainstream of nursing education, by immediate needs to address a too-specific problem with limited data, and by a dearth of both conceptual insights and baseline data directly relevant to our needs, research on Second Step education and outcomes has until now been severely limited in scope and generalizability. Findings have, in most cases, been program-specific and non-cumulative. For these and other reasons, much of our work has remained unpublished.

The National Second Step Project, begun in 1978, took these circumstances as a challenge to action. Not only did we plan to conduct a significant investigation of the Second Step phenomenon on a nation-wide basis, but we also hoped to create a community of scholars around this timely topic. In a series of two national research conferences, our goals were to find out what <u>was</u> being done in this field, to bring those researchers together in an atmosphere conducive to dialogue, and to provide a sounding board for information rooted in systematic and scholarly inquiry--information needed both by those who carry the research forward and by

those who develop and take part in the programs themselves.

The first of these conferences took place in the heart of San Francisco on January 14-15, 1980. Despite the weather, it was generally agreed by the more than one hundred twenty-five in attendance that the event was highly successful in achieving its formidable objectives.

This volume contains the formal content of the conference, insofar as we are able to present it to a wider audience. Some stylistic editing was required as was permission of the authors to re-print their work. Simple budgetary restrictions prevented transcription of the many fine introductory remarks by session moderators, and all question-and-answer periods as well as the "Conversations with the Authors" held at the close of each afternoon. Thus, it is left to the reader to complete the dialogue here begun--to actively read, react to and make use of the research brought together in these pages. We commend this thematic collection of papers to your thoughtful attention, and look forward to an even more productive exchange in the coming year.

Katherine L. Jako, Editor
February 26, 1980

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GUEST PRESENTATIONS

Welcome to the Conference

George L. Proctor, Ph.D., Director, Institutional Research
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(Transcription not available)

Curricular Implications of the Second Step Concept

Jerome P. Lysaught, Ed.D., Professor of Education, Medical
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Keynote Address: The Uses and Abuses of Research

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University of Oregon
Portland, Oregon

CURRICULAR IMPLICATIONS OF THE SECOND STEP CONCEPT

Jerome P. Lysaught

All Gaul, according to Julius Caesar, could be divided into three parts! I doubt that anyone would suggest that all the curricular concerns of nursing education could be so neatly --or succinctly--ordered, but for this occasion, I would like to suggest three conceptual frameworks that have significance for nursing education--and, in particular, for the Second Step form of programmatic planning. I will then propose one overriding concern about clinical professions and their teaching tasks which is, to me, so manifest that it requires no research, but is so essential to the three frameworks as to render them meaningless in its absence.

Let me begin by defining for you how I see nursing itself. Nursing is a scientific approach to clinical intervention for the purpose of enhancing, maintaining, or restoring the health of a client over the full range of physical, mental, and psycho-social needs. As such, nursing is an eclectic arrangement of biological, behavioral, and clinical sciences which is distinctive, for the most part, in its unique arrangement of constructs from these many contributing disciplines into an intelligible whole drawn together by clinical experimentation and evaluation. In this sense, there may not be a theory of nursing any more than there is a theory of medicine. Just as medicine borrowed and applied "germ theory" from the biologists, so, too, can and should nursing derive much of its "corpus of knowledge" from the academic feeder systems to which it relates. It is in the eclectic and pragmatic patterning of these formulations and data that nursing derives its unique, but collaborative, role in the provision of health care through a scientific process.

In saying that there is probably not a "grand theory" of nursing, I do not suggest for a moment that there are not theories of nursing process, of nursing intervention, and of evaluative approaches which can improve and extend the full scope of nursing practice. I simply view these as middle-range theories which are essentially similar in approach and scope to the theoretical formulations which influence the practice of medicine, psychology, education, social work and other "consultative" professions. Each of these is an applied clinical science borrowing from basic disciplines and seeking to refine and ameliorate its contribution to client care--whether the recipient be known as patient, counselee, student, or case.

Three Conceptual Frameworks

Let us now proceed to the conceptual frameworks concerning curriculum. The first of these is stated as a proposition which can serve as the starting point for a series of testable hypotheses. I would suggest the following generalization:

> Nursing, today, lacks a general conceptual framework for the organization of academic disciplines and approaches to provide its students with an optimal educational program for professional success as a clinical practitioner.

If this statement sounds too sweeping, let me suggest a series of formulations for curricular development which will, I trust, make the point of the proposition evident.[1] A curriculum, of course, is more than an arrangement of courses and experiences; it is, essentially, a form

of general socialization to the conduct of future professional responsibilities and, as such, requires the clear analysis of a series of concentric decision-lines. At the very core of the consideration of curriculum is the philosophic question of the elemental purpose of the socializing process--is it for the benefit of the individual learners, for the benefit of society, or for a combination of reasons in some interactive formulation. As indicated in Figure 1, there are some curricula which emphasize the growth and the development of the individual personality above all else--Summerhill would be an extreme example of this although much of the effort to remove requirements and substitute complete electivity in collegiate programming is essentially directed to this end. Others see curriculum as essentially for the purpose of serving societal ends--Jefferson wanted the clear development of republican principles throughout the curriculum of the University of Virginia and, at the height of Jacksonian democracy, there were advocates of universal boarding school education (complete with uniforms) so as to end any distinctions between rich and poor. Most of our curricular plans fall into the "interactive" area, but more by our refusal to take either of the extremes rather than by a clear formulation of the purpose for which we are educating our students.

Figure 1.

Primary curricular decision points in the formulation of professional preparatory educational programs.

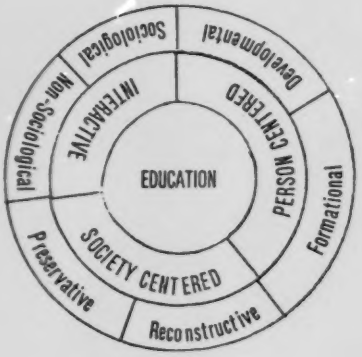


Figure 2.

Secondary curricular decision points in the formulation of professional preparatory educational programs.

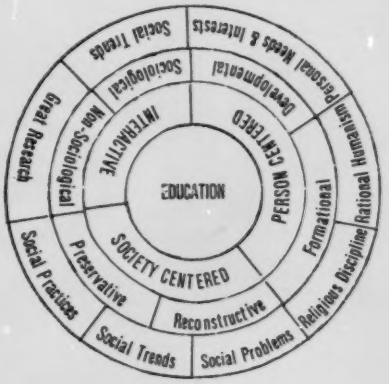


Figure 3.

Tertiary curricular decision points in the formulation of professional preparatory educational programs.

To emphasize the fact that nursing education is not separate from the considerations of basic curricular decision-making, it is possible in Figure 2 to reconstruct historic and elemental designs in nursing curricula. Much of the early literature in both England and America is replete with the necessity to imbue "obedience" and "discipline" into the personal preparation of each nursing student. Nor can the significance of "uniforms" and "capping exercises" be separated from the concept of religious formation and the development of a "secular nun" whose work transcended the base and wordly concerns of those who sought mundane rewards. At the same time, Odin Anderson and others underscore the propensity of nursing to sublimate individual development in search of an eleemosynary crusade for social betterment.[2] Between the "Sister" of the English hospital and the self-effacing staff nurse in Midtown, U.S.A., there is a tenuous thread of incredible tensile strength.

Just as you see the thrust of this conceptual framework is directed toward the interactive,

so you can anticipate that my formulation of a nursing curriculum must include both sociological and non-sociological elements. For many years after the Flexnerian reconstruction of American medical education, critics have argued that in the positive development of research and rigorous biological sciences we have educated physicians to be illness-oriented rather than people-centered. More recently, nurse educators and clinicians have become increasingly aware that the psycho-social scientific approach of nursing education has not provided the basic foundation of pathophysiology and biochemistry--to name but two--that will permit nurses to make physical assessments and diagnoses essential to the determination of wellness or illness.

Just as medicine, prompted by psychiatry and family medicine has moved toward the assimilation of sociological, or behavioral sciences, so must nursing move toward the inclusion of both sociological and non-sociological disciplines within its preparatory and advanced programs. As indicated in Figure 3, this would suggest at least two fundamental areas of concentration. In terms of the behavioral sciences, this would include an in-depth examination of trending discoveries and investigations into such fields as psychology, sociology, political science and economics. In terms of the basic sciences it would include the elementary aspects of natural and pathological development, biochemistry, anatomy, physiology, and diagnostic procedures, together with an understanding of research design.

The resultant individual from such a curricular socialization should be an assertive and altruistic individual who is capable of dealing with both the physical and the non-physical elements of client need. The graduate nurse should be prepared to appreciate the vital importance of research, to serve as an intelligent consumer of research in the practice of clinical care, and to become involved in the extension of the corpus of knowledge which guides the interventive behavior of other nurses. Correspondingly, the nurse should be prepared to apply behavioral and social sciences to the planning and provision of holistic care to clients including instruction, evaluation, and follow-up procedures. Such a nurse would be neither an "unhabited nun" nor an "organizational cipher" armed with an array of procedures, regimens, and unscientific nostrums.

Obviously, the challenge for Second Step curricular planning is to assert the need for continuous and articulated learnings throughout the preparatory educational process in order to develop the most professional entrants into the career service of the discipline. If the first two years of nursing education (or three, as the case might be) emphasize essentially preservative and formational curricular elements, then, it is very difficult to resocialize individuals into a concept of both individual leadership and change agency. And yet, when we argue the need for an interactive education based on social trends and research involvement, this is essentially what we are asserting.

Our longitudinal study of the impact of the National Commission for the Study of Nursing and Nursing Education, for example, shows that collegiate nursing students have a much higher appreciation of research, theory, and basic sciences than do their counterparts in hospital schools of nursing.[3] What that fact masks is that most collegiate schools, as well as diploma programs, build their program and their clinical content essentially around the medical services model of the contemporary hospital in an essentially preservative formulation that is reflected

in current state board examinations and in licensure requirements. Moreover, those collegiate nurses who have ostensibly been prepared for "leadership" positions find that they are faced with "reality shock" when neither the job demands nor the nursing service expectations match the contents of their curricular preparation.

We shall return to this last point in the conclusion of the paper; but for now, I would like to suggest one simple researchable hypothesis that could be explored through curricular investigation and evaluation:

> X_1. To the extent that nursing education becomes truly interactive, combining elements of both sociological and non-sociological sciences, and emphasizing both social trends and research, it will become more capable of socializing professional practitioners capable of becoming more judicious in their selection of eclectic elements related to the enhancement of client care and the enlargement of their own field of therapeutic intervention.

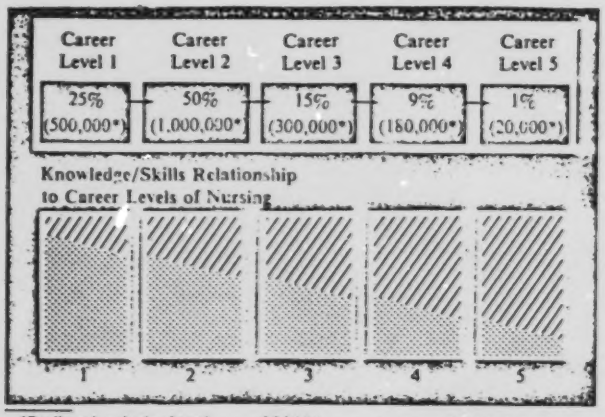
As nursing discards both the extremes of personal formation and social preservation, it can begin to develop individuals with both the scientific knowledge and the social concerns not to see the world--and nursing--as it is, but to see the world--and nursing--as it should be, and have the knowledge and the capacity to change it. And in doing this, the professional nurse of the future must have a data base in both the biological and behavioral sciences which will assure that decisions are made on probabilistic measures, not on idiosyncratic assertions about a utopian existence. Nurses must lead and contribute to incremental change, and their curriculum must be a socialization process to give them the armamentarium to carry such a process through successfully.

In relation to the reconstruction of a conceptual framework for curricular development, we come to our second basic proposition related to nursing education. Sometime in the late forties, the literature in this field introduced two terms in juxtaposition--"technical" and "professional." So widespread was the acceptance of this distinction that few questioned the validity of the separation between two- or three-year preparatory programs and those of longer duration. A few critics argued that the terminology was not based on experimental evidence and was, in reality, a false semantic separation. Common wisdom, however, took the view that there was no conceptual relationship between the associate degree and baccalaureate programs--certainly, no more than might be contrived between the diploma program and the baccalaureate sequence.

Over the past thirty years, an increasing body of solid evidence has appeared to refute the "separatist" philosophy. One of the most fundamental of these lay in the work of Lucile A. Wood,[4] whose study of career models for nurse practitioners clearly established the fact that there was, and is, an integral relationship between performance skills and knowledge elements and that the preponderance of beginning clinical activities is clearly weighted in favor of the former. Just as the "emblem" of the third-year medical student is the ever-present stethoscope, and the "symbol" of the early engineering entrant is the ubiquitous slide rule, so every profession, as well as occupation, necessarily builds its advanced cognitive base on rudimentary psychomotor skills.

Seen in this light, the first two years of a Second Step program take on a very different perspective. Instead of spending two years in complete isolation from the clinical aspects of

professional socialization, the lower-division student is undertaking both beginning scientific learnings and the acquisition of elemental psycho-motor skills which are related to patient care. In terms of the Wood model (Figure 4), this is not a case of proactive inhibition to learning, but is, rather, a desirable feature in a continuous curriculum design of growth and enlargement. The inclusion of psycho-motor skills at an early point facilitates the cognitive and affective learning of knowledge elements. Two examples from medicine may suffice to suggest, if not prove, the point: in a growing number of medical schools there is pressure to include clinical experiences within the first year of the program rather than waiting until the third year, which is the traditional start of "patient interaction"; and, in a longitudinal survey of the curriculum at the University of Rochester School of Medicine it was found that student knowledge on the pre-clinical portion of the National Board examination increased rather than declined over the period of clinical training primarily as a result of interaction between basic and applied experience.



Source: "Career Model for Nurse Practitioners." Lucile A. Wood, director, USDE Grant 8-0627, UCLA, Division of Vocational Education, March 1972.

Figure 4.

Career sequences for progressive levels of clinical mastery in nursing practice.

There is as much basis for conceptual argument--and more of an evidentiary basis in experimental research--to indicate that the inclusion of planned clinical experience in the early years of nursing preparation enhances the total outcome more than the "traditional" baccalaureate approach of building all nursing courses onto a two-year foundation exclusive of clinical involvement and interaction. (In fact, more than 80 per cent of all nursing baccalaureate graduates originally completed their program in an associate degree or diploma program and have, in fact, represented one form--albeit far from ideal--of a Second Step product.)

To go into the basic literature of curriculum design and development is instructive in this regard. When one discards the non-utilitarian titles of "technical" and "professional," it is possible to discover that most writers in the field of curriculum theory prefer that cognitive, affective, and psychomotor content be interrelated and mutually supporting. Rather than apologize for the fact that someone has learned a performance skill early in his or her education, we should be attempting to develop a coherent and integrated map that will guide the learner through an ever-enlarging, every-challenging arrangement of competencies which include knowledges, attitudes, and skills. The "Fundamentals of Nursing Practice" are obviously not the clinical measure of a professional nurse, but they are the sine qua non to meaningful patient-practitioner interaction--and, if they aren't, then the course should be completely re-evaluated and reorganized.

To come back to our basic definition of nursing, it is, in my opinion, a scientific approach

to clinical intervention. And it is that very fact of clinical intervention which argues for integrated, systematic experience over the longest possible time period in meaningful practice in client-nurse relationships. Four years is not too long a time for such experience--though it should be graduated, toughened, and expanded over the duration of that period. Thus, the Second Step concept lends itself ideally to the formulation of a curricular framework in which every year contains elements or modules of basic and applied science leading to the formulation of unique, eclectic provinces for nursing intervention and inquiry. Such a concept has been incorporated in the educational design of the Southern Regional Education Board Nursing Curriculum Project,[5] in the Orange County/Long Beach Consortium,[6] and in the planning committees of numerous Second Step institutions. My concern is that many who are involved in these activities, as well as the vast majority of those uninvolved, see this as an artificial or substitute arrangement for what "ought" to be, when, in reality, it may carry the distinct essence of superiority in its own right. In any event, I am prepared to state a second hypothesis:

X_2. To the extent that nursing education includes both elements of related and nursing science throughout the curriculum, and to the extent that the nursing science content is designed to apportion cognitive, affective, and psychomotor competencies across the broad range of learnings, graduate students will be able to provide improved client care and expand the scope of their own clinical practice.

Rather than argue the validity of the concepts of "technical" and "professional," nursing should recognize that the behavioral definitions of competencies related to clinical nursing are both intertwined and additive, rather than separate and discrete. It is certainly a researchable point--rather than a primitive assumption or issue of honor--whether learning something about clinical skill performance detracts from later cognitive and affective development. The history of American nursing, alone, refutes the claim to supremacy advanced by some advocates of the status quo in baccalaureate nursing education. The best answer can be obtained by careful measurement and evaluation of programmatic outcomes. To argue against, or to inhibit, experimentation is the grossest form of intellectual debasement and unprofessional conduct. At the same time, let us pledge not to replace one orthodoxy with another. By basing a curriculum on social trends and research findings and processes, one would hope that specific elements of the curriculum design would be in a constant process of change. But understand that the socialization processes of individual formation and social preservation--by which many nurses have been nurtured into the profession--are strongly weighted against innovation and alteration. History tells us that reformers and revolutionists, once in power, find it easy to eradicate dissenters and revisionists alike. To argue for an equal place in the sun for the Second Step concept is not to argue for the elimination of generic programs--or for the birth prevention of still other models. The single criterion to consider is the worth of the proposed outcome and the thoughtfulness of the attempt to reach it.

Having spoken of the broad patterning of curricular arrangements proposed in the first part of the paper, and having asserted the necessity for the inclusion of cognitive, affective and psychomotor competencies across each stage of the curriculum, I would like to suggest a third consideration for curriculum planning that would represent an elementary concept to each instructional unit or model. While the first proposition of the model stressed disciplinary domains, and the second asserted the necessity for arranged competency development, the third speaks to the specific environment within which the curriculum is modulated and transmitted.

In this conceptual scheme, any--and every--instructional experience can be located on an environmental continuum from wholly extrinsic to wholly intrinsic with three primary factors affecting the locational point. These factors are: a) the degree to which the instructional experience is teacher-centered or student-centered; b) the degree to which limited or multi-sensory approaches are employed; and c) the degree to which time is fixed or variable for teaching and learning. The epitome, perhaps, of an extrinsic environment would be the didactic school of medicine identified by Flexner in 1910. This institution operated almost exclusively by means of a lecture system in which control was entirely in the hands of the professor, in which time allocations were fixed, and in which instruction consisted entirely of oral delivery. Contrast this with the independent study programs currently utilized in some medical schools in which the students determine the way in which they will approach the acquisition of competencies, the order and the time allocation of learnings, and the specific medium they will employ out of a variety of alternatives. Figure 5 represents the "psychological distance" between such diverse approaches in terms of the learning environment.

The implications of this conceptual scheme are several. The "centeredness" of the teaching-learning process inherently speaks of control. To the extent that we wish to socialize future professionals into responsibility for their own life-long growth, we must provide for progressive movement from teacher-control to learner-control. Not all learners are equally adept at visual, or aural, or tactile modes of instructional delivery. To the extent that we can provide a variety of sensory modalities, we can increase the probability of more effective learning on the part of a larger number of students. Finally, the function of time alone is a major determinant of learning effectiveness. Not only do students vary in terms of the time needed to learn elements of the nursing curriculum, but the individual student will, in all likelihood, vary considerably in the speed of learning cognitive, affective, or psychomotor skills--and vary in the acquisition of physical science subjects in comparison with behavioral science materials. This leads to a third general hypothesis:

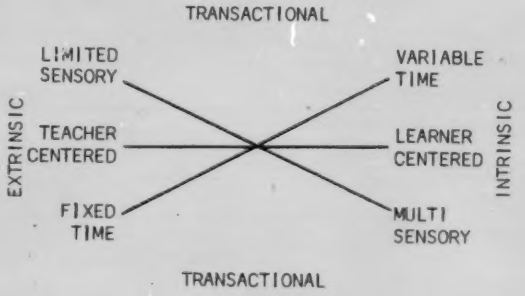


Figure 5.

The learning environment of professional education.

X_3. To the extent that nursing education develops its curriculum to provide more intrinsic learning environments along the factors of teacher-learner centeredness, time allocations, and sensory modalities, it is possible to develop more self-responsible students capable of mediating their time and instructional methods to attain the objectives of the professional sequence.

Implicit in this hypothesis, of course, is that the objectives and competencies of the overall curriculum are outlined and are broken down into more specific arrangements of cognitive, affective, and psychomotor learnings. Such an arrangement is particularly important to a conceptual framework of interactive socialization in which the future professional is to be

grounded in the cutting edge of both sociological disciplines and basic science. The challenge of such a learning task with its emphasis on research and innovation demands that continuing education become a reality in intensely personal terms. The environment of instruction, then, must be one conducive to the development of learner control and learner manipulation. Obviously, one does not initiate a wholly intrinsic pattern at the outset of professional socialization--but we cannot afford to overplay the largely extrinsic design for very long. The key element is the direction of movement and the rapidity--taking into account that individual students will, and must, vary in their assumption of responsibility and in the quality of their decision-making.

The role of the teacher, however, particularly in professional education is to move toward the development of an independent, self-controlled graduate whose ability to make individual decisions is appropriate to the responsibilities cast on a beginning practitioner. The learning environment must be supportive of such growth and disengagement.

Role of the Faculty

At the outset of this paper, I suggested that there were three research hypotheses that I would like to suggest: the organization of the domain of nursing "content," the fusion of the cognitive, affective, and psychomotor elements of the curriculum, and the development of a supportive learning environment for both professional socialization and continued self-direction of competency assurance. These have been treated in summary fashion, and their future can be explored through research and experimentation. There is, however, one final element of curricular concern for nursing that is more significant to the future of the profession than all of the elements I have described were they put together--I refer to the role of the faculty in relation to the induction and orientation of the student into the clinical practice of nursing.

Nathan Glazer[7] in an insightful paper examines the conflicts in the teaching-learning process for what he calls the "minor" professions--including education, social work, and other groups aspiring to full professionalism. His specifications of those problems have an essential significance for nursing; let me paraphrase his generalizations in this way:

1. There is an inherent conflict between a faculty made up of scholars and research workers, particularly those with a base in an established academic discipline, and students who are preparing to become practitioners.

2. There is an inherent conflict when the major professional role for which the student is being trained is itself inferior to some ancillary role which is part of the total curriculum.

3. There is an inherent conflict when the status of the academic disciplines of the faculty outranks that of the profession for which the students are being prepared.

4. There is an inherent conflict when changing knowledge and technology outstrips the ability of the faculty to "keep up" with practice requirements and skills.

If we were to apply each of these possible conflicts to nursing education, the results might be very instructive. For example, the great majority of nurse faculty members in all of the 1,400 preparatory programs have very limited responsibility for client care. As teachers and as "scholars and researchers," they are instructing students into the practice of clinical

care which they no longer have any real responsibility to provide. The inevitable conclusion to be drawn from this is that the ability to teach "about" nursing is more important than the ability to "do" nursing. This is reinforced by the fact that decisions on tenure and promotion for nursing faculty are ordinarily based on such academic concerns as publications, research, and institutional contributions. In only a small percentage of cases is there demand for evidence of clinical excellence.

In terms of the second point, nursing has long suffered from the fact that there has been no career perspective for nurse practitioners. Indeed, the two paths upward from the staff nursing position which led to greater reward, recognition, and compensation were those of nursing administration and nursing education--both of which placed limits on the amount of patient contact time. The major professional role of nursing was essentially inferior to those ancillary roles which had nothing to do with clinical intervention on behalf of the client. Again, with the development of nurse practitioners and clinicians, and with the advent of certification and the repatterning of nursing service organizations, we are beginning to take small steps toward the idea of a career perspective built around nursing practice. But the steps are slow and halting.

Until the 1960s, there were almost no graduate programs in clinical nursing. Institutional faculty were graduates of master's programs in nursing education or in some related academic field like education or psychology. The proportion of doctorally prepared nurses was even more seriously skewed, with the vast majority of the individuals prepared in academic disciplines other than their own professional field. This has led the phenomenon of hyphenated nurses--nurse-sociologists, nurse-anthropologists, nurse-physiologists, but very few nurse-clinicians. The impact of this skewing is self-evident. It tends to reinforce the difference between "scholarly" faculty and student practitioners by adding the element of advanced status by virtue of the credentials gained outside of nursing in another academic field.

The final point, of course, is that unless nursing faculty have continuing responsibility for significant portions of client care it is impossible in a clinical, consulting profession to provide up-to-date knowledge and preceptorial instruction to the student clinician. The difference between the profile of medical and nursing faculty on the dimension of involvement in patient care is so sharp that the comparison is odious--except in a few institutions--and that is the crux of the point I wish to make.

In order for nursing to avoid the conflicts identified by Glazer, and by many thinking nurses as well, it is necessary to address the faculty role in terms of the elemental thrust of the profession. If the definition of nursing is the scientific application of clinical intervention, then the practice of nursing must be the prime quality of the faculty while the ancillary roles of education and administration are subordinated to the advancement and recognition of clinical excellence. In particular for nurse faculty, this means that promotion and tenure must be based, in the first instance, on the ability to provide excellence in role modelling for their students and, secondly, on the other appropriate academic requirements. This would mean that nurse faculty, in order to keep up to date and to provide excellent preceptorial guidance, must essentially have joint appointments in the manner of the so-called unification model of nursing education and practice that is currently being utilized at Rochester, Rush, and Case-Western Reserve.

In no way is this intended as a parochial argument based on the fact that I, too, am from Rochester. The fact of the matter is that no clinical, consulting profession can ever become a full profession, and a full partner in the health care delivery system, until it asserts its commitment to practice as the primary and ultimate measure of personal excellence. Someone once remarked that a society which lionizes philosophers and disdains plumbers is in serious trouble because neither its logic nor its pipes will hold water. Similarly, any clinical profession which provides its greatest rewards and recognition to those who no longer practice but devote themselves to ancillary roles is doomed to the constant limbo of a near-profession and not to serious acceptance as a consulting profession.

The particular significance of the concept of the unification model to the Second Step formulation of nursing education is that the lower- and upper-division approach is the only model of collegiate education currently available that would provide four years of clinical role modelling in a continuous, articulated formula extending across the entirety of the preparatory program. The implications of such a system are enormous; the problems involved in implementing such a scheme are just as great.

Because, however, there are still a limited number of Second Step programs, because it is still possible to develop joint planning with articulated lower-division programs, it is wholly conceivable that these institutions could make a commitment to the most essential feature of the nursing curriculum and insist that clinical role modelling is the most important feature of professional development, and that every nurse faculty member must have an ongoing and significant commitment to the provision of client care in some practice setting. With this as a foundation, then the previous concerns of curricular domains, competency elements, and educational environment become testable variables in the optimizing of the professional socialization process.

If nursing education is left to faculty members, however scholarly, who are not themselves role models of clinical excellence, we shall continue to demonstrate the fact that practice is only an entry level niche in the professional hierarchy and that the ancillary roles of education and administration are the real "stuff" of which the profession is composed. If this continues to occur--as it has largely since the 1900s--then we don't really need to debate the curricular components of nursing. And surely we don't need to argue whether nursing is or will become a full profession. It isn't, and it won't!

When nursing educators assert their own commitment to the profession and demand to maintain a continuing responsibility for patient care and the reinforcement of personal excellence in clinical practice, then the corner will have been turned on the road to full professional recognition. When this is supported by the repatterning of nursing service organizations to ensure that excellence in clinical nursing is rewarded and that the non-nursing tasks so frequently undertaken by supervisory and administrative nurses in traditional settings are systematically divested, then there is every reason to speak of parity between nursing and medicine on the basis of their professional focus and thrust. If this is not what nursing wants, then it should resign itself to a continuing dependent role and to a subordinate relationship to those full professions which have not lost sight of what their real purpose in being is all about.

Earlier in this paper, I spoke about the problem with "reality shock" when nursing students discover that their preparation is not consistent with their job requirements, and that nursing service expectations are different from the students' intrinsic reasons for entering the profession. What I would like to suggest is that the students, in the last analysis, are more reality centered than either their instructors or their supervisors. The students know that nursing is a clinical profession designed to help people. They know that the most important element of their whole curriculum is the provision of an excellent faculty clinician to serve as a role model for their own performance. And the students know that the role of nursing administration should be to enhance clinical care and to develop reward systems which "pay off" for staying in practice rather than retreating from it. Like the little boy who saw the Emperor naked, the nursing students have not allowed academic baubles or administrative trappings to blind them to the proper end of the profession.

Friederich Herzberg once remarked that if he knew a ditch was full of mosquitoes, he would not teach people to avoid ditches, he would teach them how to eradicate mosquitoes. In the world of nursing we have many ditches, filled not only with mosquitoes, but scorpions and snakes, as well. Our current system of both education and utilization teaches our students to avoid the ditch; we must teach them to drain it and to convert it into a garden in which professionalism, full professionalism, may flourish. The Second Step concept, bolstered by a committed and competent faculty, capable of clinical excellence, and utilizing a curricular framework modelled on the concepts which have been presented here could reclaim the ditches and the marshes and plant the seeds for a full profession. This is the possibility of the Second Step movement; its outcome is up to people like yourselves.

FOOTNOTES

1. While the arrangement of the curricular framework shown in Figures 1, 2 and 3 is original to this work, this writer is heavily indebted to the concepts of B. O. Smith, W. O, Stanley, and J. H. Shores explicated in their volume, Fundamentals of Curriculum, Revised Edition. New York: Harcourt, Brace & World, Inc., 1957.

2. Anderson, O. W. Toward an Unambiguous Profession of Nursing? Chicago: University of Chicago Center for Health Administration, Pamphlet No. A6, 1968.

3. Lysaught, J. P. Action in Affirmation. New York: McGraw-Hill Book Co. (in press).

4. Wood, L. A. "Career Model for Nurse Practitioners," University of California at Los Angeles, Division of Vocational Education (USDE Grant #8-0627), 1972.

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6. Lysaught, J. P. You Can Get There From Here. The Orange County/Long Beach Experiment in Improved Patterns of Nursing Education. Rochester, NY: University of Rochester, 1979.

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THE USES AND ABUSES OF RESEARCH

Carol A. Lindeman

In developing this keynote address, I asked myself, "What can this speech add to this conference? What can I say that will differ from but complement the other presentations?" After some debate with myself, I decided on three points. First, my comments will focus on research issues, not the educational issues. Second, the presentation should provide a framework for the audience as they listen to a diverse array of papers all considered "educational research." Third, the presentation should contain some useful information. Now that I have stated my goals, let me begin.

The Research Process

In this section, I will address each step of the research process, suggesting one or two critical questions that the consumer of research should raise.

1. Objectives

   - Long Range Goal:
     - . What is the ultimate purpose of the research?
     - . What will be achieved by the findings?
     - . How is the research related to current concerns in the profession?
   - Specific Aim:
     - . What will the immediate research do?
     - . What is the research question to be asked?
     - . Why is the researcher interested in studying this particular question? What concerns and observations led to wanting to study the question?

2. Review of the Literature

   - Is the conceptual framework or the rationale for the study clearly stated?
   - Are the underlying concepts and theories well documented by previous studies?
   - Does the review of the literature provide supporting evidence to show the need for carrying out the present research?
   - How does this study go beyond what has already been achieved?

3. Formulating Hypothesis and Making Assumptions Explicit

   - Are the important terms used clearly defined in operational terms?
   - Are the independent and dependent variables operationally defined?
   - Are these variables meaningful and realistic in terms of their possible application outside of the experimental situation?
   - Is the relationship between the independent and dependent variable clearly stated?
   - Are extraneous variables which may affect the results of the study recognized, controlled or eliminated?

4. Specification of Needed Data

   - What precise data are obtained to test the hypotheses or answers to the research questions?
   - What steps have been taken to assure that the needed data will test the hypotheses?

5. Design

   - Is the research experimental or non-experimental?
   - Were subjects randomly assigned to treatment groups?
   - Was there a control group?
   - Does the design control for the extraneous variables relevant to internal and external validity?

6. Selection of Methods and Techniques

   - Were data-collection methods, and measures to be derived from them, valid and reliable? Do these measures have any possible practical application to the real world?
   - Is the length of the study adequate for drawing valid conclusions? Is sample size adequate?
   - Were data collected by trained personnel, and in an appropriate manner?
   - Will it be possible to generalize the findings to a larger population?

7. Interpretation and Reporting

   - Who interpreted the findings?
   - Did interpretation of the data lead back to the hypotheses?
   - What generalizations can be made from the findings?
   - Apart from statistical significance, what might be the practical significance of the findings?
   - Looking at the research as a whole, what are the limitations of the study?
   - Will it be possible for other researchers to replicate the research plan? Under what conditions would it be desirable to replicate the study?

8. Personnel and Facilities

   - Did the researchers have the expertise necessary to ensure the scientific merit of the study?
   - Are the facilities where the study was carried out typical of those where the research is apt to be used?

Literature Review

A recent review of educational research[1] contains a chapter by Vincent Tinto entitled "Does Schooling Matter? A Retrospective Assessment." I have found Tinto's comments helpful in contemplating comparable issues in nursing education.

> Students of educational inequality would do well to heed the time-tested adage that it is one thing to get a job and another to keep it. In assessing the relationship between education and social attainment, it is one thing to ask about the effect of education on getting a job and another to ask how it affects the ability of a person to do well in the job. The two questions are quite distinct. They differ in the same way that access to jobs differs from performance on the job. Furthermore, they deal with different educational processes.
>
> Regrettably, research on the impact of educational inequality on social attainment has often failed to mark this simple yet important distinction. The two questions have often been confused as being one and the same. The result is that researchers have frequently defined questions and employed methods of research that were not particularly suited to the specific problem at hand. It is undeniable that we have made considerable advances in our understanding of how

schooling is related to the system of social stratification ... . Yet a number of important questions remain unresolved. The intent of this review is as much to assess what else we need to do in the study of education and social attainment as it is to judge what has been done thus far. (p. 201)

The available evidence suggests that the acquisition of educational credentials is more closely associated with the ability of a person to gain access to high-status occupations than it is with ability to do well in the occupations that are entered.

Regarding access to jobs, recent research questions the position of the more radical revisionists that particular educational institutions, controlled by existing elites, act as sponsoring agencies to promote selected individuals to high-status (elite) positions. Only among high-status occupations are such institutional effects evident. These effects appear more as latent institutional capacities which able and motivated persons of a variety of social origins can activate for their own personal advancement. Sponsorship does not seem to be an active institutional phenomenon which applies to all members within the institution; simply being at a high-quality college does not guarantee access to high-status occupations. At the same time, the research does not support the position ... that ability and 'luck' are the most important factors in status attainment. Though it is true that performance counts, it is also true that college quality matters in the attainment of high-status occupations. Furthermore, it is evident that access to prestigious colleges is not a random phenomenon in the social system or determined solely by past academic performance.

With respect to education's impact on on-the-job performance, it is evident that we have been unable to detect any simple or sizable direct effect of schooling on job performance as it can be measured by earnings. Whether this finding reflects the real world or the shortcomings of current research models is unclear. It is our impression that the latter is the case; our current models have been unable to capture the manner in which education leads to the differential acquisition of skills that impact on subsequent on-the-job performance. Regrettably, researchers continue, for the most part, to rely on models of attainment which emphasize between-school differences, even with mounting evidence that differences within schools are more effective in accounting for differential student outcomes.

In any event, it should not be assumed that we will ever be able to explain, through the application of relatively simple models of attainment, most of the variance in adult occupational status. As currently conceived, our present models of status attainment are based on the assumption that most people evaluate potential outcomes of education in very much the same way, and such evaluations are in some simple manner directly associated with social status background. That is, it is assumed that most persons have the same values regarding different orders of educational and social goods or that these values are a direct function of social status. Although a number of persons have pointed out the inaccuracy of this assumption ... , we have yet to see a thorough application of social models of decision theory to the study of education and social attainment. When we do, it is likely that important linkages will appear between the family, the school, and other important socializing contexts and the manner in which educational attainment impacts on social status attainment of differing individuals and groups ... .

Further increases in the power of research models will also depend on the more extensive application of a variety of methods of social research to the study of educational and social inequality. What is required, in particular, is the merging of methodologies and studies at different levels of analysis (e.g., societal, community, organization and group) so as to lend insight to the complex set of linkages which tie in micro and macro patterns of inequality through the mediating influence of the school. At the same time, there is a clear need for the development of a comparative profile of occupation-specific studies of education and status attainment ... . Though a number of such studies now exist ... , they were not intended, nor can they be used, for a strictly comparative analysis of education's variable influence on social

> status attainment. Finally, so as not to lose sight of the culture-specific basis of stratification, there should be additional studies of the longitudinal process of attainment in differing countries. A number of such studies are now becoming available ... , but there is much more that can be done in this area.
>
> Although we have learned much about the impact of education on the process of status attainment, much more remains to be learned. As in most fields of intellectual endeavor, answers to current questions give rise to more questions which serve as the objects for future inquiries. (pp. 227-229)

Conclusion

Applying the research process to complex educational issues, including both process and product, requires care and rigor. It is indeed difficult to conduct quality research. However, it is even more difficult to be a thoughtful consumer of that research. Values, preconceived ideas, and the desire to prove one's self to be right may cloud our thinking. There is an inclination to automatically accept research findings that support our beliefs, and to find fault with research that supports hypotheses in conflict with our beliefs. But this is a conference with a research focus. We are here as scientists. To function as anything less will further curtail long overdue improvements in nursing education.

FOOTNOTE

1. Shulman, Lee S. (Ed.) 1977 Review of Research in Education (A publication of the American Educational Research Association), Itasca, Illinois: F. E. Peacock Publishers, Inc., 1978.

THE NATIONAL SECOND STEP PROJECT

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Overview of the NSSP

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Program Goals: Implicit Assumptions and Hidden Tensions

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Frontiering: An Emergent Concept for Nursing Research

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The Bottom Line: Graduates and Careers

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OVERVIEW OF THE NATIONAL SECOND STEP PROJECT

Mary Searight

The National Second Step Project has two major thrusts. One is a three-year comparative study which involves an in-depth evaluation of the students, faculty and overall educational milieu of six of the first Second Step programs accredited by the National League for Nursing. The other is the preparation of an Evaluation Associate from each program. While this project is an entity in itself, its roots are imbedded in research which began at Sonoma over eight years ago; and an overview of the National Second Step Project must necessarily include a brief historical background.

Since the inception of the Sonoma Second Step program in the Fall of 1971, there has been a strong commitment to research as a foundation source of formative and summative evaluation. Because of its non-traditional format, strong and heated arguments had surrounded the establishment of the program. Many questions were raised. Could an upper-division program be built on a lower-division pre-licensure base? What was technical nursing? What was professional nursing? What was the role of liberal studies as preparation for professional nursing? Would the graduates of the Second Step program have the knowledge and skills which characterize the professional nurse?

The first research project, initiated in the Fall of 1972, was a longitudinal study designed to examine some of the basic premises upon which the Sonoma program had been built and to determine its success in achieving specific goals.[1] A secondary purpose was to provide baseline data on the characteristics and interests of students who entered and graduated from the program.

In 1975, funding was received to conduct a second and more sophisticated study which integrated unit and process analysis in an investigation of personal characteristics of students, teaching styles of faculty and the total educational environment. This project, titled "Demonstration Study of a Second Step Program," was directed toward generating a theoretical model and a methodological approach that would isolate processes and characteristics which contributed to both academic and professional success. This undertaking provided the nursing department with data and findings that generally endorsed the program and its curriculum. The national impact of the study is evidenced through numerous publications, through the accumulation of a data bank which is probably the most extensive source on registered nurse students in the United States, and through increased activity among nursing researchers focused upon post-licensure baccalaureate education for registered nurses. The final report from this research has been published and is available through the National Technical Information Service.[2]

Thus far, the nursing research team had been involved only in studying the Sonoma program; but with the tremendous growth of Second Step and Two-Plus-Two models nationwide, and the continuing difficulty experienced by many programs in achieving NLN accreditation, the need to expand our focus became increasingly apparent. Further, there was the continuing need to broaden our avenues for communicating the results.

Funding for the National Second Step Project was received in July 1978. We began by selecting our six Evaluation Associates and conducting an orientation workshop for them on the Sonoma campus. Since then, we have continued to keep in touch and to provide consultation through site visits as well as by mail and telephone. Our first publication, titled Evaluating Nursing Education: A Research Manual, was written primarily for the use of the Evaluation Associates; but because of its broad application, this manual is also being made available through the National Technical Information Service.[3]

Activities related to the six-campus evaluation include the definition, analysis and description of student and faculty characteristics. The study is also concerned with educational patterns and types or processes of academic and professional achievement in each of the six programs. We will explore the ways in which these phenomena are interrelated, and will hopefully be able to identify "constellations" wherein they are associated. Thus, the components and outcomes of the Second Step model of nursing education are being characterized; and finally, the formulation of a descriptive and analytic model of Second Step nursing education is being developed.

Here we are halfway through the three-year project, which is rather frightening because there is so much yet to do. On this occasion, we are presenting three papers which will introduce you to some of the work accomplished thus far. But, I thought you might like a very light thumbnail sketch of our study sample and what we have begun to learn about "second-stepping."

When we began this project, we anticipated that there would be great similarity among the six programs. The six are alike in that all are fully accredited by the National League for Nursing. In fact, they represent six of the very first such programs to be granted NLN accreditation. But in other ways, they represent considerable diversity.

These six sites cover an impressive range of institutional, curricular and student characteristics. Half of the programs are strictly upper division; the other half are Two-Plus-Two. Three are decidedly urban; one is suburban; and two are semi-rural. Four are within tax-supported public institutions; the other two are in private institutions--both of which are supported by the Catholic Church. Three of the parent institutions boast a student population of over ten thousand; two are of moderate size (1,000 - 10,000); and one is quite small. Two are doctoral-granting institutions; two have Master's programs; two are strictly for undergraduates. The total enrollment of RNs in the nursing departments varies from less than 50 to approximately 200. Finally, they are spread clear across the country from the Eastern seaboard to the Mexican border.

While some central themes in curriculum persist, such as emphasis on the holistic man, physical assessment, community health, communication skills and some form of advanced clinical practice, each curriculum is quite distinct. Two programs have a nurse practitioner option; four do not. Perhaps one of the more distinct clusters of student characteristics is found in two of the programs with Two-Plus-Two formats. Large numbers of their upper-division students were also their lower-division students, who proceeded directly from the ADN to the BSN program. This population is younger than the population at large, and student characteristics may be more like those of four-year generic baccalaureate students than those of the re-entry Second Steppers.

It is difficult to determine what the ultimate spin-off of the National Second Step Project might be, but the staff anticipates the following potential. We believe the quality and usefulness of evaluation research in Second Step programs will be improved by increasing the research competence of local faculty members on the six selected campuses. We also believe that by adding to the body of shared knowledge concerning educational patterns, student characteristics, and types of professional achievement of graduates of Second Step programs and by comparing and contrasting the variety of forms these emerging programs are taking, some of the crucial questions concerning the true nature of professional education for nurses may be addressed and clarified.

FOOTNOTES

1. Department of Nursing, Sonoma State University. Final Program Performance Report: "Second Step: Career Mobility for Associate Degree Nurses." Report prepared by Haywood C. Vaughan and Mary W. Searight. May 31, 1977. (Unpublished.)

2. Jako, Katherine L.; Church, Edward; Wilson, Holly S.; Brian, Sally; Dean, Hannah and Searight, Mary. Final Report of a Three-Year Demonstration Study of a Second Step Nursing Program. Springfield, VA: U. S. Department of Commerce, National Technical Information Service, HRP #0900617, 1979.

3. Jako, Katherine L.; Brian, Sally; Church, Edward and Searight, Mary. Evaluating Nursing Education: A Research Manual. Springfield, VA: U. S. Department of Commerce, National Technical Information Service, HRP #0900626, 1979.

PROGRAM GOALS: IMPLICIT ASSUMPTIONS AND HIDDEN TENSIONS

Marilyn Little

The nursing profession is in the midst of change. Nursing literature and journals abound with articles on expanded roles and a new professional image. A credentialing study recently recommended new procedures for professional licensing and accreditation. Laypersons are increasingly aware of these changes. Both local and national press reports cite the assertiveness of nurses who are demanding better working conditions, better salaries and more authority. Clients at Kaiser receive a multi-phasic examination from a nurse practitioner and are impressed with the competency of the nurse in a new role. Young women on a University campus respond enthusiastically to nurses who teach them about birth control, and in the process, increase their awareness and acceptance of their bodies. Corporate executives may react with a mixture of surprise and consternation when they find the nurse they have employed is not simply passing out band-aids, but is reviewing the safety procedures of the plant.

Change within a profession may be examined and analyzed through a variety of measures. The National Second Step Project views change through the eyes of students, faculty, graduates and the professionals who work with our graduates. Another way to understand what is happening within the nursing profession, and particularly within the Second Step programs which have recently begun to spring up around the country, is to examine the documents which justify and explain these programs. Reports written for accreditation committees and other documents describing the philosophy, aims and curriculum of a program are excellent sources for understanding a program. What is the major purpose for the program? How do its leaders view nursing and the position of nursing within the health care system? What types of changes do they hope to implement within health care?

Three Models of Second Step Nursing Education

Ideas for this paper were generated through an analysis of documents from six Second Step programs. I reviewed accreditation self-study reports, catalogs and bulletins in an attempt to discover the educators' weltanschaaung or view of the world. How did the writers of these documents view the health care system and the place of nursing within that system?

From this review and analysis, I abstracted three models which depict three different weltanschaaungs or views of society and the health care system. These three models may be labeled as complementary, collaborative and critical.

Although each model makes different assumptions about nursing and uses a different set of philosophical propositions to support its view, it is preferable to think of them as points on a continuum of change within nursing rather than as three distinct and separate categories. It should also be kept in mind that these three models are abstractions; they do not describe any one Second Step program. Quite typically, a program may have characteristics of more than one model and may not be easily pigeon-holed.

Throughout my presentation, I hope to demonstrate that program goals and objectves rest upon certain assumptions. Such assumptions may be explicit; but more often than not, they are implicit. Philosophical beliefs about nursing education and practice may be suggested or implied. Tensions emerge when these assumptions differ from the beliefs assumed by others around us. It is, therefore, important to examine and understand the assumptions upon which we base our nursing theory and practice.

In this theoretical paper, I will first describe the three models, outlining the major components of each. The second section suggests links between theory and practice. Several examples demonstrate the ways in which a different theoretical approach to nursing may result in different behaviors in nursing practice.

I. The Complementary Model

The complementary model perceives nursing as an occupation assisting or aiding medicine in the delivery of health care. Nurses are taught procedures in patient care which involve a minimum of judgment and skill. The field is quite carefully defined and practiced within well-known legal and professional limits. When nurses go beyond these limits, they must do so indirectly and discreetly. Education must, therefore, concentrate on the development of skills and very limited abilities in diagnosis and interventions.

The movement toward professional nursing has tended to downplay this type of technical nursing and has tended to portray it as belonging in the past. Yet, practitioners who care for hospitalized patients in a skillful, empathetic manner still form the backbone of patient care. It is reasonable to assume that at least in the near future technical nursing may be an accurate description of the function of many nurses. Perhaps rather than view it as a kind of second-best in nursing, it may be considered the first level of nursing care, and one which will continue to exist as a major component within health care. However, since the Second Step programs in our sample gave very little attention to this type of nursing and do not utilize a complementary model to any extent, I will concentrate my remarks on the second the third models.

II. The Collaborative Model

The collaborative model, which is most descriptive of the programs studied, makes the following assumptions:

1. First, social relationships are primarily cooperative and collaborative rather than competitive; the focus is upon ways in which human beings assist each other in meeting goals of mutual importance. Thus, program objectives stress adaptation rather than confrontation, cooperation rather than conflict, and collaboration rather than negotiation. A key assumption in this model, then, is that <u>professional relationships are collaborative</u>.
2. Second, society is a collection of individuals. The unit of analysis is the individual, not the institution or the culture. To understand society, one must look at the individual and the meanings each person attaches to life and to the surrounding world. If changes are to be made in society, they must come from the individual. Nurses, as professionals, must therefore assume some <u>individual</u> responsibility for bringing changes to the health care system.

3. Third, the collaborative model accords to each individual the utmost respect. People are equal; as human beings, all have rights which must be respected. Differences in class, education, income or occupation do not make one individual more deserving of attention than another. Thus, all persons, regardless of socioeconomic status, have the same right to health care.
4. Finally, if society is a collection of individuals, how is social order maintained? What is the glue that holds it all together? It is socialization. People learn to cooperate through the socialization process. The collaborative model assumes that nurses and physicians learn their professional roles through the socialization process of the nursing and medical schools. They learn to be professionally responsible and accountable. An inadequate socialization process may result in a failure to acquire and maintain professional standards. Nursing education is responsible for developing professional standards. These standards imply not only the acquisition of clinical expertise, but also the internalization of professional attitudes of accountability and responsibility.

The collaborative model, therefore, focuses upon cooperation and collaboration among individuals who are inherently equal and who have been socialized to appropriate values and behaviors.

What rationales or philosophies are used in the construction of the collaborative model? How do nursing educators arrive at a collaborative model? What theories do they use to explain their position? Among these six Second Step programs, I found two different philosophies or approaches taken to develop a collaborative model: the humanistic and the rational orientation.

A. Humanistic Orientation

The humanistic orientation focuses upon the individual as a spiritual being; humanism may rest upon either a religious or a secular base. It may be inspired by theological teachings on the spiritual nature of man and the moral order of the universe, or it may reflect the cultural humanism as expressed by the human potential movement with its emphasis upon development of each human being. Whether the underpinnings are religious or secular, statements of purpose for these programs emphasize humanity's essential goodness; words like "integrity," "dignity," and "right to self-determination" are commonly used. For example:

> Man has basic needs, which he strives to meet, moving toward his own integrity.
>
> Man's values generally reflect those of his culture, but universal among these are his desire for recognition of his own dignity and the right to his own self-determination.

It is assumed that each human being is involved in a quest for growth and fulfillment of unique potential, constantly striving toward an optimal state of physical and emotional well-being. Students who enter these programs are expected--almost required--to be motivated by desires for self-actualization. As one program phrased it:

> It is necessary that (the student) understand himself and his expectations.

Responsibility for self lies ultimately with each individual. Others may give assistance, but they cannot assume full responsibility. Students are, therefore, responsible for their own learnings; teachers serve as facilitators or resource persons. Clients are similarly

responsible for maintaining their own health; nurses provide assistance by collaborating with clients to strengthen those behaviors and resources which promote optimal functioning.

The humanistic orientation, then, focuses upon personal dignity, the search for fulfillment and responsibility for self. A secular or religious humanism supports the collaborative model of cooperation, egalitarianism and professional responsibility.

B. Rational Orientation

Other programs arrive at the collaborative model by a very different path. This orientation holds that society is best understood by an examination of its rational order rather than by reference to a moral order or to each individual's quest for fulfillment. Relationships among individuals, institutions and society as a whole are seen as rational and orderly. Systems theory may be applied to understand both our society and the position nursing occupies within the health care system.

While systems theory exists in many variations, the way in which it appears to be applied by nursing educators in the development of program objectives is as follows: Society is understood as a system; nursing and health care delivery are both subsystems. Society is similar to an organism in which the parts work together for the benefit of the whole. When the parts are in equilibrium, society experiences harmony; when they are out of balance, discomfort results, and efforts are then made to bring the parts back into a balanced state.

The optimal goal is equilibrium, or homeostasis. Each individual component has an opportunity to offer input into the system. Systems theory implies that through democratic process, input from various components is digested and results in an output. Feedback from the output serves to correct and maintain the system. Change is accommodated through the process of input, output and feedback.

The following quotes from the philosophies of these programs illustrate the application of systems theory in nursing education:

> Society is considered a supra-system. The health care system is a component of society of which nursing is a subsystem. It is society which gives the health care system and the nursing subsystem its purpose.

In the documents, the individual is often perceived as a system interacting with other systems:

> Man is a bio-psycho-social being. He is an open system, active, adapting to and responding to his environment. The biological, psychological and social components of man interact as a single system as man adapts to environmental forces.
>
> Man operates as an open dynamic system interacting in a supra-system of society which includes factors related to life style, family constellations and culture.

Whether approached by the humanistic, the rational, or (as is more frequently the case) by some combination of both orientations, the collaborative model is very appealing. Part of its allure arises from its promise of equality and responsibility. Whether cooperation

occurs within a moral order or a rational system, opportunities exist for assuming control over one's fate through responsible action. Through either personal growth or input into the system, an individual can bring about improvements in society.

However, the collaborative model has some very serious flaws. First, this model ignores political relationships. It gives little attention to the distribution of power within an agency or society. From our everyday experiences within the health care system, we know that all clients are not served equally. Some groups within our population have more access to health care and receive better treatment than others. Also, we know that all health care providers do not have the same power within the system. Nurses, even with professional training, have less power than physicians; they do not share equally in the resources distributed by the system, whether these resources are authority, status or money. Decisions in an agency or health care institution are seldom made democratically. The collaborative model, by ignoring these realities, fails to address the inequity of services and resources within the system. When such inequities are noted, it is assumed that corrective changes may be brought about by individual action. This focus upon the individual overlooks the fact that political relationships exist, by definition, among groups of people and not among individuals. Change within political relationships requires changes in power structures and not simply changes in the one-to-one interactions of individuals.

Second, both the humanistic and rational orientations of the collaborative model tend to conserve or maintain the present order. Historically, explanations of the moral order of the universe have tended to defend prevailing social orders. With its emphasis upon homeostasis, systems theory also is preoccupied with stability and has a built-in bias for conservation. Therefore, while the collaborative model has great appeal and is widely used to explain nursing and nursing education, it fails to address some critical issues in the delivery of health care.

III. The Critical Model

The third model is the critical model. It assumes that conflict, rather than cooperation, is the key to understanding social order, that resources are limited rather than infinite, and that competition determines the control of these resouces. When conflict theory is applied to the delivery of health care, it calls attention to the inequitable distribution of health care services and recognizes the existence of political relationships among professional groups. It assumes a critical view of the impact of the health care system.

The adequacy of health care was critically assessed by writers of one document who described problems found in the immediate service area:

> The primary problems identified within the present system include: (1) fragmented, inadequate health care delivery; (2) the lack of health care services available to the population at greatest risk--namely the poor; and (3) maldistribution of primary health care providers.

Two major divisions exist among proponents of conflict theory as it is applied to health care. Within the first group, Friedson, Mechanics and Illich have focused upon professional

dominance. They describe ways in which medicine has dominated the health care system, and denounce the over-medicalization of life and the client's loss of control over his own process of care and treatment. They advise a greater sharing of power, increased regulation of the medical profession, and greater consumer awareness and responsibility.

The second group of critical theorists share a similar focus upon political relationships. They, too, recognize the inequitable distribution of goods and services. However, they do not agree on the source of the problem. The medical profession is not held entirely responsible; making medicine men the scapegoats ignores the real source of power. C. Wright Mills, for example, says medical practitioners really have very limited power. He states that power exists on three levels, with a small elite at the top, professional and political figures in the middle group and the majority of the population on the lower level. The most important decisions affecting the distribution of goods and services are not made by professionals but by an elite group of men and women who covertly control both economic and political life. Thus, while nurses may be commended for taking great strides toward professional recognition, both physicians and nurses alike are manipulated by policies established at a higher level.

Theoretical Models and Practice: An Application of Theory to Practice

Now, what difference does it make which model is adopted by a program of nursing education? Does the adoption of one model or another have any impact upon the day-to-day practice of nursing? Is there any link between theory and practice?

I believe there is. I believe that all practice is based upon some philosophy of the world in which we live. Whether our assumptions are articulated or unexamined, they affect the decisions we make and the little, everyday behaviors. To suggest some ways in which program philosophies may influence everyday behavior, I will illustrate how assumptions from both the collaborative and critical models can mold and affect nursing practice.

Three objectives are very frequently cited in the documents I reviewed. Thus, Second Step programs are striving to educate professional nurses who will (1) Plan for and promote high-level wellness of the client; (2) Act as patient advocates; and (3) Function as a facilitator for change in the health care delivery system. Let us consider how the adoption of the assumptions from either a collaborative or critical model of nursing will result in very different interpretations of these objectives and, ultimately, different behaviors.

The first objective, promoting a high-level of wellness in the client, involves several processes: possessing a knowledge of the health-illness continuum, understanding basic physiological processes which interrupt health, identifying and assessing these interruptions, and helping the client plan for and attain an optimal level of functioning. As you may recall, one of the key assumptions of the collaborative model is that individuals are responsible for themselves. A nurse helps clients to understand illness, to identify the factors within their own lives which create stress, and to draw upon resources within the environment to achieve a more integrated life and restore health. The individual, therefore, with the help of the professional nurse, is capable of moving toward a more optimal level of wellness.

However, many people who enter the health care system suffer from illnesses and disease brought upon them by their environment. Industrial pollution, stress created by noise, heat and intolerable working environment wear down the body and induce illness. These are all factors over which the individual has very little control. They cause social ills, not personal individual ills. Unfortunately, the health care system, instead of identifying and labeling these factors as social problems requiring collective social action, has often been co-opted into supporting the social system which creates the problems. Over the years, medical personnel have acquired the power to define both the illness and the etiology. They may label one complaint a legitimate illness, define a second person as sick, even if he doesn't complain, and refuse a third person any social recognition of his pain or disability (Illich, 1976). A client who comes in sick because of conditions in his work environment may be declared disabled, removed from the work place and given a small pension. Illich claims that "people who are angered, sickened and impaired by their industrial labor can escape only into a life under medical supervision and are thereby seduced or disqualified from political struggle for a healthier world." (Illich, 1976, p. 43) Such diagnosis often serves to invalidate social and political complaints against stress of work. In this way, medicine may function to benefit industrial society. It shifts the focus from the destructive conditions within industry to individual responsibility for illness. Professional nursing, when it assumes that the responsibility for illness or health lies primarily with the individual, cooperates with a society which finds it easier to assign personal blame than to change social values.

A more critical view of our society and of health care, however, implies that promoting a high level of wellness involves much more than instructing the patient and guiding him in the development of better personal health habits. It involves a critical assessment of social values and practices.

A second objective often stated by Second Step programs specifies that the professional nurse should act as a patient advocate, working collaboratively with others to improve health care for the patient, and acting on behalf of the patient. But what precisely does this term mean? How does a nurse function as a "patient advocate"?

If nurses view the health care system as a collaborative enterprise undertaken in the best interests of the whole, then nurses cooperate with physicians and administrators to assist the patient through the process. Large systems, such as VA Hospitals, Kaiser, and in-patient hospitals, tend to be very bulky, impersonal bureaucracies. Part of the process here may be guiding the patient through these unwieldy bureaucracies, attempting to ensure the patient's needs are met and she/he is not simply overlooked or ignored. If the patient is resistant to treatment because of lack of information or fear, the nurse may assume some responsibility for instructing the patient and removing some of the blocks constructed against treatment. Thus, the nurse facilitates the patient's progress through the system by teaching, counseling and advising.

This particular view of health care assumes the interests of the various components of the system are complementary and not competitive. A critical view of health care questions this assumption and suggests that the interests of the various groups are at times in conflict. Physicians and hospital administrators may have goals which conflict sharply with those of the patient. For example, drugs are administered in the hospital to relieve pain. While the

rationale suggests that this policy is adopted because of patient demand, it is also quite clear that patients who are not in distress are easier to manage. Patients who are asleep or in a relaxed, quiet state require less time and energy from fewer personnel, and, thereby, reduce costs of operation. Or, the true source of one's disease and impending death may be withheld from a patient on the justification that disclosure of this information will make the client angry or depressed. He may regress and give up his will to live. While these reasons supposedly benefit the patient and shield him from a painful experience, they also protect the medical personnel and the family from wrestling with questions of pain and death. They provide a protective shield for those who fear the patient's anger and distress. Patients who wish to struggle with their own lives and deaths are labeled as resistant, obstinate and non-cooperative. Being a patient advocate in these circumstances may mean taking seriously the patient's right to experience his life and grapple with his pain and death without being drugged into submission.

A second example: How does the nurse assume the role of patient advocate in the Intensive Care Unit? If a patient is kept alive by life-sustaining machines and is clearly incapable of sustaining his own life, what do you do when he stops breathing? Do you follow the doctor's orders and resuscitate him, even though you know he lives as a vegetable and that through these interventions, you are adding to the enormous costs assumed by his family? Do you allow him to die? Do you confront the physician with the dilemma and attempt to negotiate a new order? What are the patient's best interests? What are the hospital's interests? Certainly acquisition of expensive technology helps the hospital remain competitive within the community. Such machines, once acquired, must be utilized if the costs are to be met. Advocating either an abbreviated use or non-use of this expensive technology is bound to incur angry resistance from hospital administrators, under the guise of humanitarian arguments for saving lives and reducing pain.

The term, "patient advocate," has a radical ring. However, the radical intent of working for the best interests of the patient may be thwarted if the nurse assumes that the interests of all components are complementary and interprets her role simply as one of guiding, teaching and managing. She then becomes co-opted into becoming an advocate of the agency rather than an advocate of the patient. Perceiving the interests of the various groups within the health care system as competitive and contradictory may realistically prepare the nurse for the hostility and antagonisms encountered when the patients' needs are taken seriously and efforts are made not to change the patients' perspectives but to change agency policies and procedures.

The third program objective states that the professional nurse should function as a facilitator for change in the health care delivery system. Within the collaborative model, it is assumed that change is inevitable, continuous and universal. Systems theory suggests that all systems are involved in constant change; but since stability of the system is valued, changes should occur in ways which are not disruptive. Similarly, the humanistic orientation suggests that all individuals are evolving, and that change should be viewed as healthy and essential. Thus, whether the approach to this model is humanistic or rational, change is valued. Nurses are encouraged to be adaptable and flexible in accepting change. They should also help the client understand and adapt to changes within the system. The nurse is thus a change agent.

This view of change locks in an accommodation per se, without any evaluation of the purposes or consequences of change. A more critical view of the health care system would ask the

following questions; What kinds of changes are being proposed? Why are changes proposed? Who is proposing them? Who will benefit from these changes? Are they being imposed upon one group by another? What are the consequences?

Policies for change are often born and implemented at higher levels of authority; nurses, individually and collectively, have little opportunity to direct such policies. For example, expansion of a hospital, purchase of new technology and employment of personnel are decisions made by boards of directors and administrators. These decisions may enable the hospital to remain competitive within the community; but the clients bear consequences of these decisions, often in an increased cost for care.

In 1974, accelerated costs of health care stimulated government intervention. Health Systems Agencies were created to control health care costs and allocate resources for health care more equitably. HSA's are charged with the responsibility of improving health of area residents by increasing accessibility, continuity and quality of services. They assume responsibility for the orderly planning of change. What better place is there for nurses to work for changes which benefit clients and particularly disadvantaged groups within the community? However, a recent release from the National League for Nursing (1979) stated that nurses composed only six percent of the governing boards of HSAs. The NLN concluded, and I would agree, that nursing must become more visible in health policy making. HSAs are making decisions affecting the future of health care. Nurses who wish to mold and shape the directions of change rather than passively accept it as inevitable, will need to involve themselves in political agencies, such as HSA. This type of representation requires, however, a concerted organizational effort on behalf of the nursing profession.

In conclusion, theory <u>does</u> affect practice. A weltanschaaung which emphasizes a collective and cooperative interplay of professions ignores very real inequities in the distribution of goods and services. A patient advocate who assumes the agency's and the patient's interests are similar may be co-opted into becoming an advocate of the agency. A nurse who assumes that change is inevitable, but fails to evaluate its impact, abets policies which allow inequities to continue unchallenged into the future.

In the past decade, nursing has moved from a complementary model of nursing toward a collaborative model. The major thrust has shifted from technical training to professional education. While the documents from these six programs indicate that the collaborative model is currently the most favored, ideas embedded in these materials suggest that nursing may be edging its way into a more critical view of the health care system. It will be interesting to note within the next few years the changes in philosophical stance of the nursing profession and the impact these ideological changes have upon clinical practice.

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FRONTIERING: AN EMERGENT CONCEPT FOR NURSING RESEARCH

Katherine L. Jako

Introduction

For some years now, the nursing "press"--the journals, the conference reports, and pronouncements from the professional associations--have resounded with news of "expanded roles" in nursing. We tell ourselves that nurses are no longer limited to caring for patients--that they are moving into more creative roles in health care--that they are becoming autonomous decision-makers, more enterprising, more "professional."

Those of us who are involved in Second Step research have, no doubt, added to that clamor; and at least some of us feel that this particular educational model has made and is making a unique contribution to changes that are taking place. But we have had a hard time articulating the exact nature of that contribution, and why it might be both theoretically and empirically linked with the premises and practices of Second Step nursing education.

Obviously, the mere fact of making baccalaureate education available and accessible to RNs is not the "necessary and sufficient" cause for change in the profession. But to the extent that we can specify the essential concepts and properties which differentiate Second Step education from the three more "traditional" routes to a first-level nursing career--those of the diploma school, the associate degree and the generic baccalaureate--to that extent we will be able to achieve a more solid negotiating stance with regard to the four significant audiences that we must address: (1) the institutions of higher education, where our programs must be housed and nourished; (2) the professional associations by whom our programs must be accredited and legitimized, (3) the vast and amorphous population of nurses from whence we draw our students and our faculties, and (4) the equally diversified array of service agencies and practice settings wherein our graduates must carve out their careers.

The researcher's task is to "explain," but to do so with a solid and verifiable grounding in empirical evidence. If our approach is quantitative, we may explain by counting, percentaging and specifying the relationship of certain observable facts to others. If we prefer the qualitative mode, we may explain by looking, listening and speculating as to the significance and meanings of what we have observed and experienced. But regardless of the strategies we employ, explaining a complex social phenomenon involves constructing what the social scientist calls a model--an abstract but nonetheless credible and valid "picture" of the essential qualities of the phenomenon we seek to explain.

One of the major research objectives of the NSSP is to delineate the Second Step "model" --not merely to describe its typical students, faculties, settings and outcomes, but to extract, if you will, its "essence"--those essential elements and processes which, in a sense, create this type of nursing education and which differentiate it from other equally valuable but inherently <u>different</u> styles of nursing education.

The building blocks of the "model" are concepts--ideas which emerge from our interpretation of data. When the theoretical model is complete, all the concepts we create will stand in some understandable, coherent, sensible relationship to one another. Taken together, these central concepts and their hypothesized relationships will provide a way of "explaining" the social phenomenon as a whole--in this case, Second Step nursing education.

I hasten to add that our Second Step model is far from complete. The data base is extensive and its potential yield promising, but the explanatory model is still in its infancy. This presentation treats only one of the more durable concepts that seems to "belong" in the model--one which we call "Frontiering." I will trace its development from its probable origins circa 1975, through its refinement and preliminary testing in 1977 and 1978, its incorporation into the research design of the National Second Step Project, its current status as both a concept and a variable, and its possible relevance and implications for research and development in nursing education.

Origins of the Frontiering Concept

As you know, an externally funded research section has been an important component of the Sonoma State nursing department since its inception. When the very first students arrived in 1972, they were greeted with a barrage of data-collection tools, and to this day that curious form of greeting has been continuously maintained and supplemented. Data have also been collected from faculty, from students as they progressed through the program, from graduating seniors, and from graduates out in the field.

It was one of those early post-graduate interviews with a student who had finished in the Spring of 1974 (and was interviewed perhaps a year later) that one of the first bits of evidence bearing on this concept was collected. "Can you tell me," the interviewer asked, "why you entered the program in the first place?" This was the response:

> It was because the program actually sounded interesting to me. I think I had really reached a point in my own life where I was bored and restless, and I didn't know what I wanted. I had a lot of job dissatisfaction, a lot of things I saw going on in the medical world that I completely disapproved of; but you know, what are you going to do about it? And I really didn't have any monstrous plans. It just sounded exciting to me. Maybe I'm sort of a rebel or a frontier person in the first place.

At another point in the interview this same respondent, who was a school nurse at the time, said:

> I don't even know why I went into school nursing. I knew I didn't want to go back to that mechanical building where people are treated like machines. I knew there had to be another way to do it ... I feel that maybe the whole nursing program was a catalyst for me. I became tremendously interested in many, many areas that I had never thought about really ever before, that I had never even thought of being connected with nursing, or the medical world at all.

That is, of course, one interview with one graduate--a particularly articulate informant who by describing what turned out to be a relatively common experience which many other Sonoma students, graduates and faculty members alluded to less artfully, was perhaps responsible for

our selection of the term "frontiering."

The next stage of conceptual development took place through a series of seminars in 1975 and '76 involving the Sonoma research section (as it was then constituted) and consultants Barney Glaser and Anselm Strauss, best known for their book, The Discovery of Grounded Theory. With their help, and with a backlog of data and speculation to go on, the "frontiering" concept began to be both broadened and refined. Two somewhat separable aspects of the "frontier" itself were discerned. Perhaps the clearest way of distinguishing the two is to think in territorial terms.

Picture a large map entitled "health care delivery." Nursing inhabits a certain territory with two kinds of "borders." One is represented by a thick black line separating it from the adjoining territory which is inhabited by physicians, and the other by an ill-defined, broken line--perhaps a range of mountains, separating it from a sparsely inhabited wilderness area. The central area of nursing's turf is safe and secure; it represents traditional and undisputed nursing roles--what nurses have always done, and what they continue to do and do well, the majority of the supporting roles of the health care system, services for which demand is traditionally high and for which qualified personnel must continuously be supplied to meet that demand. Now move toward the borders--the frontiers.

The heavy line is, in a sense, a closed border. It can be thought of as an "issue frontier," where the issue is perhaps most succinctly expressed as one of control--the supremacy of the physician in all areas of health care. Recent history shows that the border between the two territories, while hotly contested and jealously guarded, is not impermeable. Passports can be arranged, for a price. Those pioneering on this frontier are nurses who perceive their roles not as taking something away from the physician, but as dividing up the responsibilities and action of health care delivery in more subtle and discreet ways. In theory, if not always in practice, the roles of the Nurse Practitioner and the Nurse Clinician or Specialist might be thought of in this context.

The broken line is thought of as an "open frontier"; in a sense it is less of a boundary than simply the "edge" of traditional nursing practice. The adjoining territory--"wilderness area" in terms of our imaginary map--is created by important gaps in the health care delivery system such as increasing needs for preventive health maintenance, consumer advocacy and psychosocial services for the patient. The path across the mountains may be unmarked and the positions on the other side may be ill-defined, but the open frontier exists for the taking. Those who move toward it do nothing to undermine the traditional structure of health care delivery, so its pioneers will use less energy in storming the gates against resistance, leaving more energy and time for exploration and expansion.

At this stage of the game, let me remind you that no attempt to quantify or measure the concept had been made, although existing data on a great variety of topics produced findings that were logically consistent with the idea. For instance, to review only a few items, data from this one Second Step program[1] indicated that:

1) The mean personality profile of students at entry was dominated by high scores on Autonomy, a measure of liberal non-authoritarian thinking and need for independence.

2) As they entered the program, about four out of ten of these students (42%) envisioned themselves as self-employed in their future careers, and even more (51%) were thinking along these lines as they graduated.

3) About a third of the entrants (32%) had selected the Sonoma State campus specifically because they wanted to participate in an "experimental" program; and more than half (56%) indicated that their original choice of nursing as an occupation had been influenced by their perception of this field as one which "allows me to be creative and original."

4) When asked to view their chosen profession objectively, relatively few (36%) perceived it as one that was characterized by "originality and creativity," and that proportion was identical among both entrants and graduating seniors. But three out of four entrants and nine out of ten graduates endorsed that same phrase as one that was "important to me, personally."

5) Interest in the then-new role of the Nurse Practitioner ran high. Among students who enrolled between '72 and '75, those who "definitely" aspired to become NPs took in a quarter of the entrants, and more than a third of the graduates.

6) Finally, our data indicated that very early in their Second Step nursing education, almost two-thirds (63%) of the students reported that they had changed their ideas or developed new perspectives about the profession of nursing. Responses to that same question at the time of graduation approached unanimity: virtually all graduates (94%) reported such change --31% "some" and 63% "a lot."

What we had, then, was an idea, "frontiering," which we could think of either as (1) an "orientation" to nursing more or less characteristic to those RNs who elected to enroll in a Second Step baccalaureate program, or (2) a "process variable" characteristic of the educating and socializing processes which such programs promote or enhance. Support for both perspectives seemed to emerge from our qualitative data (interviews, documents and observations) as well as from the quantitative data, only a few illustrative segments of which have been reviewed here. With that supporting foundation, we entered upon the next stage of the conceptual process; thus, we sought ways to "nail down" the concept in quantifiable terms such that both its prevalence and its relationship to other variables could be determined.

Early Attempts at Quantification

In 1977, prior to the design of the six-campus study on which we have now embarked, relevant data were available from only one Second Step program. But although limited in generalizeability, the data base was extraordinarily rich. In addition to literally hundreds of precoded items, successive waves of questionnaires had included no less than forty open-ended items where students were invited to respond in their own words to questions of a more general nature.

Twenty-two of these items were selected for intensive analysis, and each student's verbatim responses to those items were transcribed--one typed transcript for each of the more than 200 students who had responded over the years. Rather than deriving specific coding categories for each question, we opted for global coding--making use of all the information provided by a particular respondent in order to characterize those responses and, thus, indirectly to characterize that respondent. As we worked on variables related to "Nursing Orientation," three particular questions, all asked at time of entry, consistently provided the most illuminative qualitative data:

1) "In what type of position, work setting and clinical area do you expect to be after graduation?"

2) "What are your long-range plans for a position in nursing?"

3) "For what reason did you decide to get a baccalaureate degree in nursing?"

Four judges worked together on the analysis--two registered nurses who were members of the faculty, and two sociologists employed by the Research Section. They were able to discern four orientations, differentially prevalent among these Second Step students: Traditional, Academic, Leadership and Frontiering. The judges then coded the transcripts, first, in terms of the degree to which each orientation was evidenced, and secondly, in terms of which of the four appeared to be "dominant" for that respondent.

The first three (Traditional, Academic and Leadership) are reasonably self-explanatory and might be expected to typify nursing roles sought by students in BSN programs generally. The last, however, was the most intriguing. Points for Frontiering were ascribed to a student who "shows interest in jobs that are non-traditional; questions established health care delivery; is innovative and flexible in general orientation to nursing."[2]

Almost half (49%) of the entering students were judged to show at least some evidence of this orientation; and for thirty-eight percent, it was judged to be the dominant orientation. Their responses reflected a willingness to pioneer in or even to create new and more autonomous nursing roles. Many looked forward to functioning as independent practitioners, especially in remote or rural areas. Others hoped to "set up new programs, develop new ideas for health service organization," "work in the community as a consultant," "set up programs in mental health and nutrition, both for educational groups and for communities," "helping to provide health care where it is needed, being creative, innovative and constructive," "to joust with the system."

As an exploration of meaning and prevalence, the analysis had been fruitful; the Frontiering orientation was more clearly specified, and its hypothesized linkage with Second Step nursing education tended to be supported by these tentative findings. Its "place" in the conceptual model of Second Step nursing education, however, was necessarily dependent upon findings from a broader and more representative sample of programs.

Incorporating the Concept into the NSSP Design

As you know, our research design will eventually permit both longitudinal and multivariate treatments of data from a variety of perspectives, enabling us to explore the process of Second Step education as well as merely considering "input" and "product," which is primarily what we have done thus far. In later analyses, using information from faculty, from students at various levels, and from graduates in their future work settings, the Frontiering concept may be explored as a "process" variable--as something that develops or changes during the course of the educational experience, and perhaps as a component of the socialization process that Second Step programs foster. At this stage, however, we have analyzed only entry-level data; therefore, our focus is upon its manifestation as an orientation. It exists as a name given to a cluster of attitudes that appear to be linked with an inclination toward certain kinds of nursing roles: specifically, those that are less "traditional" and that will, if pursued, draw these nurses toward the frontiers of nursing practice.

In many ways, the NSSP study was built from the earlier single-campus demonstration study. On the other hand, the six-campus study is by no means a replication. Data collection tools were considerably revised and strengthened. Certain questionnaire items were added specifically for the purpose of furthering our understanding of Frontiering and its relationship to Second Step nursing education. For instance:

1) "On a scale of 1 to 5, how important were each of the following considerations in deciding whether or not to enter nursing?" To thirteen "considerations" adapted from the old questionnaire, we added: "--gives me a chance to help bring about needed changes in the health care delivery system." In our sample, this turned out to be "important" to 43% of the Fall '78 entrants.

2) "Indicate how much interest you have in the following clinical areas." To the seven clinical areas from the old questionnaire, we added "Nurse Practitioner." Seventy-one percent indicated considerable or strong interest in this career option.

3) "How would you rate the health care delivery system in this country as you understand it to exist at present?" Response categories ranged from #1 = "It is an excellent system, serving the needs of our population as well as can be expected, given the current overall economic situation" to #5 = "It is severely limited, badly in need of major revisions and reallocation of resources in order to serve our population adequately." Among the Fall '78 entrants into all six programs, only one percent chose the first option; 37% chose the latter.

These kinds of data certainly did nothing to <u>refute</u> our hunch that students who chose to enter Second Step programs may be more inclined toward the "frontiers" of the field than those enrolled in other kinds of nursing education. On the other hand, such findings, derived from cross-sectional data obtained from "all students" did little to clarify the concept itself. If there <u>is</u> a definable nursing orientation that we choose to call Frontiering, and if some students are more disposed toward that orientation than others, what else can we learn from and/or infer about such students? Why bother to make the distinction? What does a prevalence or a paucity of students with this orientation tell us about factors of self-selection in admissions? about probable program outcomes? about the impact such an orientation may have upon the practice of nursing as it moves into the next decade? In short, we needed to know the antecedants and the correlates of this orientation, and for that purpose we needed to operationalize it as a more clearly defined variable. To do so has entailed three essential steps thus far:

1) First, we coded each entrant as to nursing orientation, using basically the same guidelines that were developed in the demonstration study and the same questionnaire items as sources of data.

2) Second, since the data from which nursing orientations were coded dealt primarily with occupational preferences, whereas our mental construct included attitudinal properties as well, we refined the coding process in order to align it more closely with all of the things a Frontiering orientation actually represented to its creators--us! I'll explain in a moment how that was done.

3) Third, using the "completed" definition, I proceeded to select an exploratory sub-sample from our relatively broad population of Second Step entrants who met all of the criteria set forth, and then to find out something more about them. What we can find out right now is, of course, limited to the "antecedants" I spoke of earlier. Where do they come from? How do they get that way? But since these same 1978 entrants will be followed throughout their academic careers and on into a post-graduate practice setting, considerably more may be learned in the months to come.

Now let's return to the matter of how the concept was more narrowly defined. I began with the two variables derived from the global coding of qualitative data from all entrants. One served to identify 97 cases for whom the Frontiering orientation had been judged to be "dominant"; the other identified 77 cases for whom the Frontiering orientation was "clearly" evidenced in their volunteered responses to that series of open-end questions. A cross tabulation of these two variables, then, isolated 71 cases that qualified on both counts. That was the first cut.

Then, from all of the other information we had collected at entry, I selected another twenty variables that were conceptually related to what we thought a Frontiering orientation should encompass. These items were selected to discriminate among cases on the basis of five general content areas:

1) First, I looked for moderate-to-high commitment to nursing as an occupational choice and as a profession. My reasoning was that nurses who merely talk about moving in new directions but who concurrently indicate a certain ambivalence about the field as a whole and their future roles therein may lack the stamina or "staying power" that a frontiering orientation would seem to connote.

2) Second, I looked for a self-concept that was congruent with professional ideals, and for a sense of efficacy--a feeling that their own actions might have an impact upon the profession. Those who merely aspired to "contentment" or who felt that whatever they did as a nurse wouldn't make much difference fell out on this cut.

3) Third, I considered responses to items that dealt with the hierarchy of supervision and control, particularly in the hospital setting. My rationale was that the "classic" Frontiering nurse would opt for practice settings that were less "institutional" or bureaucratic in structure and line of command.

4) Fourth, I screened for indications of interest in new ideas, new ways of doing things--a certain questioning of the status quo in areas relevant to nursing. Without that sort of attitudinal set, lip service to "being a nurse practitioner," for example, might simply be so much parroting of the "in" thing to say these days.

5) Finally, and most important, I looked for a desire for independence and a willingness to cope with ambiguity--both of which I consider essential qualities of the Frontiering prototype.

Of the original 97 cases whose "dominant" orientation had been coded as Frontiering using only the first broad definition (i.e., who were inclined toward relatively "non-traditional" roles in nursing), only 19 survived the twenty additional criteria I had set up. This small group, then, became the exploratory sub-sample. What were they like?

In many ways they were fairly typical of the total NSSP sample--in their late 20's and early 30's with three-to-five years of work experience, mostly in in-patient facilities. Their most recently held positions were usually coded "some" or "limited" responsibility, again typical of the sample as a whole. But what had brought them back to school (and they tended to have made that decision after rather than before being licensed as a registered nurse) was not a desire to better their standing in that work setting, but a desire to move out of the acute or long-term care setting. They veered away from medical specializations, and instead indicated strong interests in psychiatric and/or community health nursing. Post-graduation plans were strongly weighted toward the role of the Nurse Practitioner. More than any other group, they looked forward to being self-employed. Those that were single appeared less eager than did their counterparts in the other orientation groups to enter the state of matrimony, and close to half of the group sensed a conflict between their nursing ambitions and the role of wife and mother. Their political views were clearly the most liberal of the various orientation groups we explored, and they were the only group who indicated at least "some" interest in union activities related to nursing.

On a personality inventory,[3] this group differed significantly from all the others on most scales. They indicated more general interest in ideas and reflective thought (TI), a greater preference for theoretical concerns and problems (TO) and diverse interests in artistic matters and activities (Es). Combined with above average scores on Autonomy and Complexity of Outlook (both of which were part of the criteria for selection), these results produced a distinctive profile of high intellectuality, significantly exceeding that of most entering students. In addition to the intellectual scales, three others also produced significant differences. Thus, these students appear more trusting and ethical in their relationships with others (Am), less practical and materialistic (PO), and they express stronger esthetic and social inclinations and greater sensitivity (MF). By these measures at least, such students would seem to be well equipped to take to the Frontiers of the field.

Implications for Research and Development in Nursing Education

Research, while fascinating, is also expensive and time-consuming; and in these days of shrinking resources, the rest of the world has every right to ask, "So what? Suppose you have managed to introduce a new and valid concept for our edification--what good is it? Better yet, what is it good for?" Very briefly, in closing, I'd like to make a case for the potential usefulness of this theoretical exercise to nursing research and to nursing education.

For those in the field of nursing research, I see three distinct and concrete applications. First, it seems quite clear to me that research in nursing orientations is at a primitive stage of development, considering the rapid evolution of the profession over the past decade. There is every indication that the men and women who are today seeking their careers in professional nursing are doing so on the basis of widely discrepant motivational structures. Along with

"expanded roles," now an accepted term which has assumed a visible place in nursing rhetoric, comes an expanded clientele of potential applicants for these new roles. It is up to those of us who research the field to understand these new applicants--their perceptions of the profession and their aspirations, both of which will partially determine the contributions they will make. Frontiering, as presently conceptualized, is only one of several very legitimate orientations, all of which constitute fertile fields for further research.

Secondly, as part of such research efforts, there is a need for the development of valid, reliable and feasible ways of assessing and "measuring," if you will, these various orientations. (Need I add, less laborious and more efficient than the exploratory process described earlier!) In other words, once the orientations are themselves clarified, much work remains in the area of scale construction and the development of instruments with wide applicability.

Third, and most directly relevant to the goals of the NSSP, there is the matter of constructing a theoretical model of Second Step nursing education. I would argue that this is not a mere ivory-tower pastime. It's true that post-licensure education for registered nurses has moved swiftly from disrepute to merely controversial and now into a position of wide acceptance. But this has been primarily due to external currents in the society, in the profession and in higher education generally. I would submit that we still need a better understanding of the essential nature and processes of this form of baccalaureate education--of exactly what it is we're doing and why. If the Frontiering concept, either as an orientation or as a process variable, plays a key role in that model, then it is up to nursing researchers to delineate the model and to place the concept in its proper context and perspective.

Leaving research aside, what do nursing educators have to gain from such an awareness? I firmly believe that no single nursing education program can or should be all things to all people. The best programs have a sense of "mission"--a sense of what is most important, of what they most want to accomplish, and of what they do best. I would be the last person to assert that the further success of nursing as a profession rests upon its promotion of "Frontiering" as the way to go. I am constantly impressed with the excellent preparation that our hospital diploma schools seem to provide, and my guess is that their mission has very little to do with consciously sending their graduates toward the frontiers of the field. Nonetheless, I feel that a knowledge of the meaning and implications of various nursing orientations, along with an ability to recognize the strengths, limitations and applicability of each, can go a long way toward increasing clarity, diversity and excellence in many kinds of nursing preparation.

Finally, although this presentation has dwelt exclusively upon Frontiering simply because of limited time and space, I'd like to emphasize that, at present, I do NOT see any single orientation as inherently "more" or "less" professional than any other. My point is that student clienteles tend to select programs on the basis of the image which the program projects as well as upon more mundane factors such as cost and convenience. Nursing educators have the power to control and direct that image. Given that power, and access to better information concerning the basic professional orientations of the men and women they attract, these educators can work more knowledgeably toward designing the kinds of admission procedures, curriculum, learning experiences and post-graduate placement assistance that their own students will find most appropriate. Regardless of whether your own students prefer the "frontiers" or the "inner cities"

of nursing (where the challenges are just as great, though perhaps different), they deserve the brightest and best preparation you can provide. In return, they will influence, improve and re-shape the practice of professional nursing.

FOOTNOTES

1. Documentation of these and other findings from the 1975-78 study are contained in Jako, Katherine et al., Demonstration Study of a Second Step Nursing Program. Springfield, VA: U. S. Department of Commerce, National Technical Information Service, HRP #0900617, 1979.

2. This quotation is from page 2 of the Codebook, Qualitative Questionnaire Data (unpublished), developed by researchers at Sonoma State in 1977.

3. The instrument referred to is the Omnibus Personality Inventory. Descriptions of the specific scales cited are contained in: Heist, Paul and Yonge, George, Manual for Omnibus Personality Inventory, Form F. New York: The Psychological Corporation, 1968.

THE BOTTOM LINE: GRADUATES AND CAREERS

Sally Brian

Every program evaluation is interested in outcomes, as represented by the post-graduation activities of its students. The National Second Step Project is no exception. All Second Step programs claim that by building upon the base of technical education their students have acquired in previous nursing programs, they are preparing professional nurses. Whether or not they succeed in accomplishing this goal depends on the graduates themselves and the careers they are pursuing. This paper will look at graduates of the six programs included in the NSSP sample, and will address the following questions:

1. Who are the graduates and how do they compare with RNs who responded to the 1977 National Sample Survey of Registered Nurses?[1]

2. What are they doing after they graduate? How does this compare with positions held by the national RN sample? How do post-graduate activities compare with what they themselves did prior to enrolling in a Second Step program? How do they subjectively compare post-graduate positions with those held prior to entry?

3. What are their professional interests, and how do these compare with the interests of entering students?

4. How do supervisors rate these graduates in comparison with other baccalaureate nurses?

At this point, I should probably tell you something about the research design of the NSSP as it applies to these questions and something about the instruments that we used. First, our Evaluation Associate on each participating campus filled in a brief data sheet for all 1975-78 entrants who had completed at least one semester of academic work.

At the beginning of the Fall 1978 term, students entering the six NSSP programs completed an extensive 12-page Entry Questionnaire (EQ) which included questions on previous work experience, most recent position, professional activities and interests, many attitudinal items and additional demographic data.

In November of 1978, the first wave of Post-Graduation Surveys (PGS) went out to all 1977 or 1978 graduates who had enrolled in 1975-76, and to half of those who had entered in 1976-77. This survey focused upon a description of their current activities and expectations for the future, a retrospective evaluation of the program and, as on the EQ, their interests and participation in professional activities related to nursing. Respondents were also asked to provide us with the name of their immediate supervisor who was then sent a very short Supervisor Rating Scale.

Two hundred and fifty-four graduates returned completed surveys in late 1978. As shown

below, this sample of graduates is quite similar to the sample of 1978 Juniors who completed the Entry Questionnaire. The average age at entry into the Second Step program for both groups

Table 1. Comparison of NSSP Respondents, Post-Graduation Survey vs. Entry Questionnaire, Both Administered Fall 1978.

	PGS (N=254)	EQ (N=363)
$\bar{X}$ Age at Entry	29	30
% Women	97	96
% Caucasian	95	93
% Diploma Grads	41	35
% ADN Grads	59	65
% Continuous Attendance--All Post-secondary Education	28	28
$\bar{X}$ Number Years Basic to Entry	6	6
$\bar{X}$ Age Received Basic Degree	24	24

is a little over 29. They are overwhelmingly female and white. More of the PGS respondents had received their basic education at a diploma-granting institution, but the difference is not significant. Most Second Step students and graduates have not gone straight through all their postsecondary education; less than one-third of both groups have had continuous attendance. In fact, the mean number of years between completion of the basic RN and entry into a Second Step program is six years for both groups. The average age of these nurses when they received their basic degree was 24. Since there are no significant differences between these two groups of respondents, we feel it is legitimate to compare across cohorts cross-sectionally.

Our other comparison group is the National Sample Survey of Registered Nurses conducted by the American Nurses' Association in late 1977. That survey obtained information on the licensing status, demographic makeup, educational background, and employment activity of a representative sample of all RNs in the United States. The availability of information from that undertaking was quite opportune, enabling us to view our graduates in this broader context.

Respondents to the NSSP Post-Graduation Survey are a bit younger than the national sample; their median age is 31.2 as compared to 37.7 years for all employed nurses. The approximate percentages of males and non-whites in each group are quite close. We had no way of comparing marital status, but these few basic demographic variables seem to indicate sufficient comparability between the two RN samples.

Post-Graduate Careers

Almost all PGS respondents considered themselves to be in nursing at the time of the survey. Two percent were currently not in nursing but expected to return, and less than one percent had left the field completely. Almost one-fifth (18%) had continued with degree-credit enrollment in this short period since graduation. Most of these were seeking Master's degrees in nursing, although a few were in education or the behavioral sciences. One-third of these graduate students were receiving stipends averaging over $2,600 a year. Very few Second Step graduates

were unemployed at the time of the survey, and some of these were in the process of relocating.

Using job titles and place of employment as specified by PGS respondents, we compared them to the National Sample of all RNs whose highest degree was the baccalaureate, and found a great deal of similarity. Differences were noted in only a few areas. NSSP graduates were

Table 2. Comparison of Employment, NSSP Graduates vs. National Sample of BSN Graduates

	National BSN Sample (N=2187) %	NSSP PGS Sample (N=227) %
Full-Time Employees	68	79
Part-Time Employees	32	21
Employment Setting:		
Hospital	60	62
Nursing Home	5	3
Nursing Education	6	7
Community, Student or Occ. Health	21	17
Physician's Office	4	6
Type of Position:		
Administrator	4	6
Supervisor	7	3
Instructor	9	7
Head Nurse	7	4
Staff Nurse*	61	62
Nurse Practitioner, Clinician	2	15
Private Duty	1	0
Other	7	4

*Includes Office Nurse, Clinic Nurse and Public Health Nurse

more likely to be employed full time, and the percentage of nurse practitioners is far greater. Fifteen percent of the NSSP graduates are working as nurse practitioners or nurse clinicians as compared to only 2% of all employed baccalaureate nurses. This is partially a reflection of the curricula of two NSSP programs which include specific NP preparation, but it may also suggest the influence of current professional trends toward expanded practice. Nurses who come back to school to seek a baccalaureate degree may be more motivated to move toward the frontiers of nursing practice that Katy Jako discussed in her paper. All in all though, Second Step graduates appear to have positions and employers remarkably similar to the RN population nationwide.

The real contrasts appear when we compare what the graduates are doing with the most recent nursing positions held by students before they entered a Second Step program. The 1978 entrants were cross-sectionally compared with 1978 respondents to the Post-Graduation Survey on the basis of (1) the type of position held, (2) the setting in which they were employed, (3) the level of responsibility of the position, and (4) the salary received.

Prior to entry, students were overwhelmingly employed as staff nurses (85%). Less than 10% had worked as head nurses or above or in teaching, research or public health. By contrast, less than half of the graduates were employed as staff nurses and the remainder were almost equally divided among practitioners, supervisors or administrators, instructors and public health nursing.

Table 3. Comparison of Employment, Entry Questionnaire vs. Post-Graduation Survey

	EQ (N=324) %	PGS (N=227) %
Type of Position:		
Staff Nurse	85	48
Private Duty Nurse	2	0
Office-Clinic Nurse	4	4
Nurse Practitioner	1	14
Head Nurse, Supervisor, Administrator	6	15
Teaching, Research	2	8
Public Health Nurse	0	11
Work Setting:		
Hospital	86	62
Long-Term Care	4	5
Ambulatory--Clinic or Office	6	6
Ambulatory--Community Emphasis	3	15
Own Practice	0	1
Educational Institution	1	8
Other	1	1
Level of Responsibility:		
Little/Limited	51	26
Some	42	31
Considerable	6	36
High	1	6
Salary (1978)	$\bar{X}$ = $11,112	$13,420

Prior to entering, nine-tenths had been employed either in acute or long-term institutional facilities. After graduation, two-thirds were employed in these settings. The biggest change occurs in the area of ambulatory care including the initiation of health care in the community (3% EQ vs. 15% PGS), and in educational institutions which claim over 8% of the graduates as compared to less than 1% of the entrants.

The difference in level of responsibility is also dramatic. Prior to entry, over 50% were classified as having held positions with little or limited responsibility, where one-fourth reside after graduation. Conversely, less than 10% prior to entry were classified as having considerable or highly responsible positions, where over 40% of the graduates are classified.

Both EQ and PGS respondents worked approximately 35 hours a week; however, the average annual salaries of the two groups are quite different. Prior to entry, students had earned slightly over $11,000 a year. After graduation, the mean salary is $13,420 per year. These figures are roughly comparable in terms of inflation since data were gathered for both groups in late 1978. Differences are statistically significant for all of these employment variables. Thus, although Second Step graduates differ very little from the National Sample of all RNs, they tend to have changed the type of positions that they hold and increased their levels of responsibility and salaries.

Most graduates, however, do not see their current positions as permanent. One-fourth specifically say they are in temporary jobs and another 44% are uncertain about their job tenure. Since having more employment options is a motivating factor in acquiring the BSN, many graduates may still be exploring (or at least desirous of exploring) new opportunities that may now be open to them.

Graduates were also asked to subjectively compare the position they held prior to entering a Second Step program with their current position on a number of different items. They rated each item on a five-point scale where 3 = about the same, 1 = much more in their previous position and 5 = much more in their current position. This table shows that graduates see

Table 4. Subjective Comparison of Own Positions Held Before and After Second Step Program (PGS, 1978)

	$\bar{X}$ Rating
Personal Satisfaction	4.22
Autonomy	4.15
Professional Advancement	4.14
Status	3.98
Educ. Qualifications Required	3.93
Increased Earning Potential	3.89
Knowledge and Skills Required	3.89
Supervision Provided	3.64
Job Security	3.38
Supervision Received	2.41
Scale Mean*	3.88

*Supervision received recoded to same direction as other items.

a great deal of improvement to have occurred in most areas. Items which the graduates rated as having improved the most are "amount of personal satisfaction derived from your work," "degree of autonomy you have in your work," and "potential for professional advancement." They also saw quite a bit of improvement in the "status connected with the position," "educational qualifications required," "potential for increased earnings," and "actual knowledge and skills required for job performance." Not surprisingly, since only one-fourth consider their current jobs to be permanent, the area in which they see the least improvement is "job security." They report that they receive less supervision and provide a bit more, but changes here are not great. Therefore, both subjective and objective measures indicate job improvement from pre-enrollment to post-graduation.

In order to examine the relationship between the graduates' subjective view of their positions and the actual positions held, an additive scale was created using the ten items in Table 4. The scale itself fits together very well and is quite reliable (Cronbach's alpha = .81). By dividing the scale scores into quintiles and then testing for an association with "position," we found that the respondents who perceived the greatest overall improvement were nurse practitioners (almost half in the highest quintile) and nurses involved with teaching, research or education (over one-third in the highest quintile). Those employed as staff nurses or in office or clinical nursing were overwhelmingly in the two lower categories.

As might be expected, level of responsibility was also very highly correlated with this scale. Nurses in positions of only limited responsibility perceived the least improvement (over 70% in the two lower quintiles), while those with considerable or high responsibility perceived the most positive change (almost two-thirds in the two upper quintiles).

Two demographic variables are positively linked with these perceptions of "improvement." Those who received basic preparation in an AD program and those who were older when they

received their basic degree tend to see more positive change. Age at entry, the number of years between their basic and subsequent degree, and whether or not they had other postsecondary education make no difference in their subjective comparisons.

Professional Interests and Activities

One universal program goal is to increase the professional orientation of the graduate. We operationalized professional interest and activities by asking graduates to tell us (1) on a five-point scale, how much interest they had in a whole series of items, (2) whether or not they were currently members of any professional organizations, and (3) whether or not they had ever held office or served on committees in these organizations. These items were then combined into a professional index. The scale is quite reliable (Cronbach's alpha = .80).

Table 5. Comparison of Professional Interests of Entrants (EQ) vs. Graduates (PGS), Both Administered Fall 1978

Interest or Activity:	EQ (N=361) $\bar{X}$	PGS (N=252) $\bar{X}$	Difference
Attending Meetings or Workshops	3.90	4.26	***
Acting as Resource Person	3.59	4.05	***
Acting as Leader or Coordinator	3.46	3.94	***
Reading Nursing Journals	3.63	3.81	
Doing Nursing Research	2.84	3.31	***
Interest in Nursing Organizations	2.81	3.29	***
Writing Nursing Articles	2.52	2.94	***
Belongs to Nursing Organization	42%	58%	**
Held Office or Served on Committees	11%	20%	*
Total Professional Index Score	25.37	28.60	***

* Difference Significant (Chi-Square) .05
** Difference Significant (Chi-Square) .001
*** Difference Significant (T-Test) .001

Even though the items fit together very well to form an overall professional index, responses to individual items were diversified. Some graduates expressed more interest in leadership roles and organizational activities while others expressed interest in more personal activities such as reading nursing journals, research or writing articles. A cross-sectional comparison of graduates' interests in these various activities with those of students at entry showed a significant difference on eight out of the nine items.

Table 5 shows both mean scores on each item in the professional index. Little interest = 1, and much interest = 5. Both samples indicate a great deal of interest in attending nursing meetings or workshops and acting as a resource person to other nurses and other nursing professionals. The least interest is in writing articles relating to nursing or health, but still they do manifest some interest in this area. Almost six-tenths of the graduates belong to at least one nursing organization as compared to four-tenths of the entering students. More than a tenth of the entrants and one-fifth of the graduates have held office and/or served on committees; they are playing an active role in their professional societies, and the extent

of that interest and participation appears to increase during the course of their enrollment in a Second Step program. At least on these measures, the programs seem to have accomplished their goal of improving the professional orientation of their graduates.

Neither demographic or position variables are significantly related to scores on the professional index. Interest in various professional activities obviously cuts across age, sex, race and type of position held by these graduates.

Graduates were also asked to predict what they expected their future nursing activities to include and to choose what they expected their major activity would be. As shown in Table 6, they expect future activities to be quite diverse, even more so than their current activities.

Table 6. Graduates' Self-Reports of Actual Activities and Future Expectations in Nursing, Fall 1978

	% Actual (N=249)	% Future (N=252)
Nursing Activity:		
Direct Patient Care	78	63
Supervision of Patient Care	48	49
Administration, Planning	24	49
Teaching	42	61
Research	11	19
Broader Professional Role	11	13
Major Nursing Activity:		
Direct Patient Care	54	26
Supervision of Patient Care	11	15
Administration, Planning	10	23
Teaching	10	26
Research	8	2
Broader Professional Role	6	8

Eighty percent predicted more than one activity, and approximately fifty percent checked three or more. The greatest change (actual to future) in terms of "major activity" is in the provision of direct patient care. Over half considered this to be their major activity at the time of the survey, but less than one-fourth expected a continuation of that emphasis, with most of the defectors apparently headed toward administration or teaching. Primary emphasis on research was also predicted less often than actually engaged in at the time of the survey, perhaps because of graduate students who expected to complete a thesis in the forseeable future.

Supervisors' Ratings

In order to obtain an outside assessment of graduates' capabilities, we asked each respondent to furnish us with the name of an immediate supervisor and permission to contact that person. A Supervisor Rating Scale (SRS) was mailed to each, and 181 supervisors responded. Employees were rated from 1 = very low to 5 = very high on a series of thirteen characteristics, and ratings were to be made "in comparison with other baccalaureate nurses you know and/or supervise." As shown in Table 7, the sample mean for every item was well over 3, which was defined in the instrument as "average."

Graduates were ranked highest in terms of responsibility, motivation and initiative,

general intelligence, potential for advancement, sensitivity and concern for others, commitment to nursing, and ability to perform assigned tasks. The lowest ratings were on communication skills, making suggestions for change, and leadership skills; although even on these three items, the mean scores are well above the theoretical mean.

Table 7. Mean Ratings of NSSP Graduates on the Supervisor Rating Scale (SRS), Arrayed in Order of Descending Magnitude

	$\bar{X}$ Rating
Responsibility	4.19
Motivation and Initiative	4.17
General Intelligence	4.17
Potential for Advancement	4.14
Sensitivity, Concern for Others	4.13
Commitment to Nursing	4.11
Ability to Perform Tasks	4.10
Sound Judgment	3.93
Self-esteem	3.91
Problem-Solving Ability	3.86
Communication Skills	3.80
Makes Suggestions for Change	3.79
Leadership Skills	3.77

Sample $\bar{X}$ = 4.00
Theoretical $\bar{X}$ = 3.00

The entire Supervisor Rating Scale is highly reliable (Cronbach's alpha = .92). For this NSSP sample, the group mean is 52 or an average of 4.00 on each component item. In a search for related variables, total scale scores were run against a series of demographic items, but no significant relationships were found to exist. The same was true when the graduates' positions, levels of responsibility and major nursing activities were tried as independent variables. In other words, neither position nor demographic background appears to affect the supervisors' ratings. Graduates who subjectively rate their current job as having improved the most over their former job, however, do tend to be rated higher by their supervisors. The Pearson's r between these two scales is .18--statistically significant although still quite low.

Retrospective Evaluation of BSN Program

The last area that I will cover is the graduates' retrospective evaluation of their program. In the Post-Graduation Survey, we asked them to assess their BSN program in terms of its impact on specific aspects of their professional functioning. In each case, judgments were indicated on a 5-point scale ranging from 1 = strong negative effect to 5 = strong positive effect. Their responses are summarized below, arrayed from high (positive) to low (negative).

Mean ratings for all these items clustered at the high end of the scale; in fact, very few negative responses appeared on any item. The lowest mean rating was 4.22 for "acquisition of knowledge, technical skills." More noteworthy, however, was the fact that at least half the respondents selected the highest code (5) to characterize the impact of their upper-division baccalaureate education in the following areas:

opportunities for advancement (64%); self-confidence, self-esteem (56%); the number of career options now open (55%); potential for leadership (54%); overall nursing competence (50%); and self-awareness, self-actualization (50%).

Table 8. NSSP Graduates' Retrospective Evaluation of the Impact of Second Step Program

	% Negative or No Effect (Codes 1-3)	% Strong Positive (Code 5)
Opportunities for Advancement	4	64
Self-confidence, Self-esteem	6	56
Career Options	5	55
Leadership Potential	6	54
Overall Nursing Competence	5	50
Self-awareness, Self-actualization	9	50
Maintaining Constructive Relations With:		
Those you supervise	12	48
Co-workers	11	45
Superiors	13	45
Patients, clients	12	42
People in general	16	40
Commitment to Nursing	18	48
Acquisition of knowledge and technical skills	12	37

All thirteen items combined to form a reliable (Cronbach's alpha = .80) scale which provided an overall measure of the graduates' retrospective evaluation of program impact in all these areas. Further analyses were then undertaken to discover what, if any, relationships existed between this measure and others in the NSSP data.

Two previously described scales were significantly related: (1) the comparative job rating scale (see Table 4), where Pearson's r = .40, and (2) the professional index scale (see Table 5), where r = .27. Thus, graduates who evaluate program impact most positively tend also to perceive greater improvement in their job situations, as compared to pre-entry jobs, and to indicate a higher degree of interest in professional nursing activities.

Two demographic variables were also significantly related: source of basic nursing preparation and the age at which the basic degree was received. ADN graduates indicated more positive impact than did diploma graduates (Chi-square, p = .05); and those who were older when they received their basic degree scored higher on this scale than did those who were younger at that time (r = .16). Variables not related to this measure of retrospective student evaluation included positions held, work settings, levels of responsibility, major nursing activity and supervisors' ratings.

When asked if they would enroll in their Second Step program if they had it to do over again, two-thirds responded "definitely yes" and over one-quarter said "probably yes." Only two respondents would not recommend the program to their friends who qualified for admission, although about one-third indicated "it would depend on whether or not the applicant would fit in."

The last item on the PGS was an open invitation for additional comments; and although most of the responses were constructive, positive and surprisingly personal in nature, they

are not easily summarized here. Perhaps the most revealing "finding," however, is simply that they did respond. Almost half, even after answering all the specific questions that preceded this one, took the time to volunteer additional commentary, attesting to a certain degree of interest in and "feeling for" the programs from which they had graduated.

Summary

What have we learned from all of this data? We have answers to some nagging questions that plague many educators, especially those in practical disciplines such as nursing. We know that the graduates are carrying more responsibility, earning more money and, generally, feel that their post-graduate positions have improved over the ones they had before entering their Second Step program. We also know that, at least as far as job titles and work settings are concerned, these graduates are very similar to all employed baccalaureate nurses in the U.S. with one notable exception. Far more graduates in the NSSP sample are working as nurse practitioners than in the nursing population at large.

Graduates have a significantly higher level of interest in various professional activities than do entering students. These Second Step programs appear to be accomplishing an important goal in elevating the professional orientation of those RNs who come to them prepared as technical nurses.

Supervisors tend to rate the graduates highly in comparison to other baccalaureate nurses, and the graduates themselves credit the program with having had a strong and positive impact on many areas of their professional functioning.

Previous longitudinal research at Sonoma suggests that even graduates whose titles or practice settings did not change still report improvement in practice and in professional outlook. Cross-sectional data from this study clearly support that conclusion. This poses a whole series of interesting questions for further research. Are they interpreting their jobs differently? Are they able to function more independently and with more assurance? Are they more able to deal with the problems that arise? Are there differences that the graduates perceive in the settings themselves? These and many similar questions warrant further research; it is only as we learn more about the specific functioning of the graduates that we will be able to provide sound and valid answers.

FOOTNOTE

1. Roth, Aleda, Deborah Graham, Gordon Schmittling. 1977 National Sample Survey of Registered Nurses: A Report on the Nurse Population and Factors Affecting Their Supply. Kansas City, MO: American Nurses Association, 1979. Reproduced by National Technical Information Service, U. S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161, (HRP-0900603).

THE ACADEMIC ESTABLISHMENT REACTS TO THE SECOND STEP MODEL

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Integration of a Professional Nursing Program into a Liberal Arts College

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Articulated Curricula as Viewed by Administrators of Four-Year Nursing Programs

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INTEGRATION OF A SECOND STEP NURSING PROGRAM INTO A LIBERAL ARTS COLLEGE

Alma S. Woolley

The place of nursing in academe is tenuous. At the first National Conference of Deans of Baccalaureate Nursing Programs in 1976, Mary Kelly Mullane, Executive Director of the American Association of Colleges of Nursing, warned that "the painful process of allocating reduced income will raise new questions about the appropriateness of nursing as a scholarly discipline" (N.L.N., 1977, p. 3).

Care of the sick is a task that has been done throughout history by various groups of persons, from the military and religious to convicts. It is, however, only in the past hundred years that nursing has been recognized as an occupation for which special training should be provided, and in the last sixty years that it has begun to take its place as a health profession requiring education in the college or university setting. Studies of its problems in this setting seem to support the statement of one of its leading deans and spokesmen that "nursing remains more in the university than of it" (Reinkemeyer, 1968).

Mullane (1977, p. 120) believes that this questioning "reflects honest doubt among members of many older, traditional disciplines . . . about the appropriateness of nursing as a scholarly discipline worthy of university support . . . ." As long as funds are available to support both nursing and the traditional disciplines, these doubts can be temporarily quieted; but as financial support declines, the resurgence of these questions is inevitable.

In 1974, a new baccalaureate nursing program for persons who were already registered nurses but did not have a baccalaureate degree in nursing was begun in a state-supported primarily liberal arts college. The researcher was employed as an associate professor of nursing to design, implement, and teach in the program. It was assumed by the college and by the researcher that the program would be set up in such a way as to eventually gain accreditation by the National League for Nursing.

During the first four years that the new nursing program was in operation at Walton (a pseudonym), several problem areas became evident.

(1) Some faculty and administrators were opposed to what they perceived as a "take-over" of the college by career programs;
(2) Many faculty seemed reluctant to accept career programs, such as nursing, as academic disciplines;
(3) The nursing program had difficulty in satisfying the demands of its external national accreditors for "internal consistency with the parent institution," while fitting in to the administrative structure of the college;
(4) Nursing faculty failed to fully realize the impact of the program on its students' personal and professional lives.

These problem areas indicated to me the need for a clearer understanding of the dynamics of this complex process, and stimulated the design of the study described in this paper.

In order to be of the college as well as in it, a program or discipline must be accepted and respected by students, faculty, and administration as an integral part of the institution, and as a means by which the purposes and goals of the college can be fulfilled. The major question considered in this study is: To what extent and in what ways did the nursing program become an integral part of its parent institution? More specifically, I sought to answer the following questions:

(1) What were the attitudes of faculty and administration toward the inclusion and growth of professional programs in the college?
(2) How did non-nursing faculty, staff, and administration regard nursing, the nursing program, and the nursing faculty? How did nursing faculty participate in the life of the institution?
(3) How did the nursing program attempt to satisfy the demands of its national accrediting body while adjusting to the administrative structure of the college? What formal and informal changes were made?
(4) What was the impact of the program on the personal and professional lives of the nursing students? To what extent were they integrated into the college?

My purpose, then, was to describe the integration of a professional career-oriented nursing program within a liberal arts college, in order to discover the extent and ways in which it became an integral part of the institution. My own personal inclinations and interests as well as the nature of my research questions seemed to point toward ethnographic description as both an appealing and an appropriate approach.

Choosing and Implementing a Method

Ever since I began teaching nursing in college and university settings, I have been fascinated by the behavior of nursing students and faculty and the interactions of the nursing department or school with other persons and groups in that setting. As I studied curriculum and administration in higher education, I considered the many issues that were discussed in relation to my own discipline, nursing. For my own research I wanted to closely examine nursing within the framework of academe to see how it, as a subculture, was adapting to the larger culture, the college and university.

There has, of course, been much rhetoric on the subject of nursing's inalienable right to be in that setting by virtue of its actual and potential service to mankind, its continuing attempts to codify its knowledge, and those of its members who are academically prepared to function in that setting.

As I considered the possible methodologies for examining this subject, I eliminated them one by one. Questionnaires are relatively easy to write and to collate, but the only behavior they actually document is that of the respondents at the moment they are filling in or checking off the questionnaire. Also, most people do not return them unless they personally believe the subject to be important and they are willing to reveal the information that is requested. Thus, statistics generated by such surveys can be misleading, especially in the area of human behavior; my reluctance to attempt to quantify the unquantifiable eliminated, at least for me, this possibility.

Formal interviews with a sample of persons who had more experience with the phenomenon of interest was another method I considered. But, what kind of persons? I already knew how nursing perceives itself. Any single issue of each nursing periodical published can provide a sagittal section view of nursing through nurses' eyes, and any nurse educator can expound at length on this subject immediately upon being plugged in.

I could, as an alternative, formally interview a sample of non-nurse academicians and gather their perspectives. But while this might produce some very pleasant luncheons, the information given to a relative stranger could have as little validity as that obtained from a written questionnaire. Why look so far afield, when my own situation might contain possibilities for productive research?

Finally, the idea of doing an inductive study was appealing because of my own longstanding interest in both reading and writing detailed behavioral description. I had thoroughly enjoyed and learned from such books as Tally's Corner (Liebow, 1967), Lewis's Five Families (1959) and Germain's The Cancer Ward: An Ethnography (1979). I wanted my own study to involve and even depend upon my ability to write in a way that would make a situation come alive. I settled, then, on a combination of a case study and an ethnography, that is, the purposeful examination of a subject or situation through ethnographic description.

The setting for my study was the baccalaureate nursing program at the state college where I was employed. For purposes of anonymity, tape recorded interviews were transcribed by a commercial service in another state. The name and location of the college, and the names of its employees and all persons interviewed have been changed. Informants were nursing and non-nursing faculty, students, staff, administrators, and myself. Other sources of data included board of trustee minutes, administrative position papers, official and student newspapers, catalogs, handbooks, accreditation documents, appointment letters, and interoffice memos, all of which are available to the public in the archives. But before I discuss this particular study in more detail, let me provide an overview and rationale for the general approach I have taken.

Ethnographic Description

The anthropological field work method of ethnographic description is a qualitative approach which records the way people really act in the variety of interpersonal contexts they create every day. Clifford Geertz supports Ryle's definition of ethnography as "thick description" concerned with discovering the meaning of events for those who participate in them (1973, p. 6). Geertz compares the observing, interviewing, describing, and searching for patterns that characterize the activity of the ethnographer with the reading of a faded, foreign manuscript written not in letters but in "transient examples of shaped behavior" (p. 10). He sees the major value of the findings in:

> . . . their complex specificness, their circumstantiality. It is with the kind of material produced by long-term, mainly (though not exclusively) qualitative, highly participative, and almost obsessively fine-comb field study in confined contexts that the magaconcepts . . . with which contemporary social science is afflicted can be given the sort of sensible actuality that makes it possible to think not only realistically and concretely about them, but, what is more important, creatively and imaginatively with them (p. 23).

The most important tool of the ethnographer is him/herself. The researcher's ability to learn the native's perspective through observational and interviewing skills, recall of detail, and perception of what is significant in the culture being studied are all crucial. The researcher's ability to organize, analyze, and report the data in a logical and coherent form determines the value of the completed study.

The role of the researcher in a field study may take any form from complete participant, through participant as observer, observer as participant, to complete observer (Junker, 1960, pp. 35-39). Throughout this study the researcher was a faculty member of the nursing program and the institution being studied. Prior to the initiation of the study, she was a complete participant; during the study period, she was a participant observer. During all formal interviews, when the informants were told the purpose of the study, she was an observer as participant:

> . . . a person who, by chance or intent, is entitled to a role in the system he intends to study. He does not have to be invited in; he is in. One may say that he occupies a role that would exist whether or not he was there . . . Occupying that role allows him to study the system rather than the reverse. (Lutz and Iannoccone, 1969, p. 108)

Lutz and Iannoccone support the advantages of this role in educational systems, since the closer the researcher is to the decision-making apex of the organization, the more he will be able to discover hidden agendas and information not offered to outsiders. On the other hand, Spradley and McCurdy (1972, pp. 34-35) mention the difficulties inherent in studying the place where one habitually works and where one has already learned and absorbed part of the culture, and is possibly taking it for granted. Informants who know that you are familiar with the scene may avoid obvious answers to questions in the belief that you are asking for something more technical or profound.

In ethnography, reliability refers to the degree to which the informant's responses are reliable or accurate measurements of what that person thinks and knows, rather than lies. Spradley and McCurdy state that the "task of every ethnographer, and one that continues until the end of the research, is to act in a manner that invites trust and dissipates suspicion" (p. 51). Some of the ways this can be done are explaining the purpose of one's questions; assuming the role of a student, one who seeks to learn from the informant; and being at ease and treating the informant with interest and confidence.

Validity, in such a study, is comparable to <u>objectivity</u>. It is determined by whether the researcher (the tool) reports accurately what people really say, think, or do. Complete objectivity is impossible for any human being; bias in the form of selective observation and interpretation is always operating, even in the most carefully designed scientific study. What the investigator chooses to observe and interpret is filtered by the researcher's experience and perception. Objectivity can be enhanced, however, if the researcher is aware of those personal and cultural factors which influence perception--one's own personal history, experiences and values (Spradley and McCurdy, pp. 13-16).

Lull (1976) argues for the superior <u>internal validity</u> of qualitative research methods because data and observations represent "real world" behaviors. He points out, however, that since ethnography precludes representative sampling, the researcher trades the external validity

(or generalization of findings) for the internal validity which results from the "scrupulous recording, analysis, and reporting of the detail of communication events" (p. 22).

Analytic Perspectives

These qualitative data were analyzed and reported in four sections. The first analysis focused on the college itself, the context in which the nursing program exists. It examined the climate of opinion about the goals, priorities, and future directions of the institution which would influence the allocation of shrinking resources. The distinguishing marks of an academic organization, all evident at Walton, made the political model the most useful for gaining insight into the processes occurring in this academic institution. As a miniature political system, the college was characterized by internal and external interest group conflict and dynamics, similar to those which occur in city, state, and federal governments.

Attitudes of faculty and administration toward the inclusion and growth of the professional programs in the institution were described. The conflict between those who believed that the college, as an institution, should respond to community demand in the programs it offered and those who believed that allowing the "march of feet" to determine the character of the college was abdication of their responsibilities as educators was apparent.

Politics is a process in which power is employed to gain rewards (Dolbeare and Edelman, 1977, p. 12). Even if we would rather it were not so, and that the community of learners could simply reason together, we need to recognize that in order for faculty members to gain their reward--the privilege of doing what they like to do while getting paid even modestly for doing it--both recognition of and knowledgeable participation in academic governance as a political process is necessary.

In this political model, nursing is but one interest group attempting to legitimize its claim on campus resources. Nurses need to know and to act upon the knowledge of who has the power and who are their allies. A second analysis, therefore, examined the participation of nursing faculty in the life of the college. Data from interviews with Walton faculty, staff, and administration focused on their attitudes toward nursing, the nursing program, and the nursing faculty. The dilemma pointed out several years ago by Batey (1969) of nurse-faculty attempting to operate in "two normative worlds" was seen to be operating in the situation and impeding the socialization of nurse-faculty to academia.

A third section examined the attempt of the nursing program to satisfy the specific criteria of its accrediting body, the National League for Nursing, while also demonstrating internal consistency with the administrative structure of the college, especially in regard to the program coordinator's role and functions in relation to those of other coordinators. Formal and informal changes made in that structure were considered. Getzels and Guba's (1957) model of social behavior as the composite of interactions between the institutional (nomothetic) and the personal (ideographic) dimensions of the social system provided the analytic framework.

The fourth section was concerned with the impact of the nursing program on the personal and professional lives of the nursing students. The degree of integration of the nursing

students into the college was considered and evaluated, using a framework of concepts from the literature on socialization and a model of planned change in professional education.

Implications of Findings

Since representative sampling is not used in ethnographic methodology, specific findings from this research cannot be generalized to other situations. Several of the conclusions reached by the writer as a result of the Walton study do, however, have implications for similar programs which may be begun in similar settings as a result of current and projected increased demand for educational opportunities by registered nurses licensed without a baccalaureate degree.

Regardless of the attitudes of traditional academics toward nursing as a scholarly discipline, nursing programs are currently valued by colleges as one means of supporting and even increasing enrollments in this era of fiscal retrenchment. In the political model of the college and university, numbers are power, and power can and should be used to gain rewards. If because of tradition, lack of assertiveness, or misguided sentimentality a school of nursing fails to recognize, seize, and utilize the opportunity to be a powerful internal interest group, it will not reap the reward of full recognition and integration into academe.

Politics, with its attendant conflicts among external and internal interest groups, is a way of life in colleges and universities. Nurses need to abandon their traditional aversion to the use of power which has hampered their effectiveness as autonomous and accountable professionals. They need to recognize and participate in the dynamics of the political process as legitimate and informed citizens of academia.

Nurses in collegiate settings need to be aware of how they are perceived by other college faculty whose experience with nursing has most likely been in acute care situations and in physicians' offices. Nursing's image as a helping profession is still positive and strongly traditional. College faculty are no better informed about its new health oriented, accountable, client-advocate image than is the lay public.

Building on the caring image will create better public relations than rhetoric which purports to destroy tradition. Tangible means must be sought, however, to demonstrate nursing's expanded functions to the college community in the form of comprehensive health services. Colleges whose health services display an outmoded image of the nurse as an all-purpose pill dispenser possess a built-in handicap to updating this image. Nursing faculty should be intimately involved in planning, implementing, and evaluating any nursing services offered to the college community in order to prevent dissonance between what is taught and what is practiced on the campus.

From the moment they arrive on campus, nursing faculty need to become involved in committees, groups, and activities normally engaged in by other college faculty. They need to learn from their non-nursing colleagues how to cope with the social and professional demands of life in academia. Closer association with colleagues will readily demonstrate that nurses are neither the busiest nor the most productive faculty members in the college, a myth which frequently pervades the belief system of schools of nursing.

In order to promote a new image of nursing, nursing faculty need to actively seek involvement in college activities which transcend their discipline, display their expertise in holistic care outside the audience of their fellow nurse educators, and strengthen their identities as academic as well as health care professionals.

National League for Nursing criteria for the organization and administration of nursing programs may not fit non-traditional models. The college or university model may not be adequate for dealing with the additional administrative tasks involved in advising and screening applicants and facilitating their transfer into the junior year. Although some of this work can be done by the admissions office, there seems to be a large inevitable residue which falls to the program itself. An administrative assistant, rather than a faculty member, could probably handle this process most effectively. If the college budget cannot provide for this, state and federal capitation money could justifiably be applied to this use. Failure to free faculty from this work will result in their being every bit as busy as other college faculty, but unproductive in terms of their contribution to and integration within the college community.

Differences between generic nursing students and registered nurses pursuing the baccalaureate degree are frequently cited, and are usually discussed in terms of the ages of the two groups. The assumption made is that the Second Step students are older than generic students and therefore have different learning needs and expectations. This generalization certainly does not apply to all students; in fact, if it were to be tested out rather than assumed, it could quite possibly prove to be false. Many students are entering upper division programs immediately after finishing their basic programs, and can therefore be as young as nineteen. On the other hand, many older women who are beginning or returning to college may choose a generic program in nursing. Age differences are blurring, and will probably continue to become less distinct.

The differences in these two groups of students are more likely to be a function of the belief systems developed in previous education and work experiences. Generic students can be educated about professional nursing more easily because they know little about any kind of nursing and are eager to be socialized into their chosen field. Second Step students must be "unfrozen" from the norms they have acquired not only in their previous nursing education, but from those they have absorbed from the workplace where they frequently return on weekends and after class. Therefore, in order to reduce reinforcement of the norms of technical practice in a hierarchical structured hospital situation and to minimize the unfreezing and changing process with the accompanying guilt, anxiety, and anger, students who meet the academic admission standards of an upper division program should be allowed to begin studying for the baccalaureate degree without being required to gain "experience" at another level of practice. Second Step graduates should be <u>as</u> skilled as generic graduates; there is no rationale for requiring them to be <u>more</u> skilled.

Pressures upon these returning students from families, coworkers, and friends are enormous and largely unanticipated by them. While academic standards cannot be changed or lowered, accommodation must sometimes be made for real personal crises. Feminist principles should be incorporated into curriculum planning in order to foster enhanced self-image and realistic expectations of self and others. Group meetings for spouses could possibly be organized to share and explore feelings about role changes.

Second Step students are extremely sensitive to faculty attitudes toward them and toward their efforts to grow. The "I dare you to teach me something new" attitude, which many students later admit to having had at the beginning of their program, can create a real barrier between them and the faculty and challenge the commitment of faculty who choose to work with them. Faculty in Second Step programs need a strong enough belief in the feasibility of career mobility to support both themselves and their students in the inevitable moments of doubt and discouragement.

Summary Statement

In the four years of its existence at Walton State College, the nursing program became accepted and respected by students, faculty, and administration as a means by which the purposes and goals of the institution can be fulfilled. A high quality, rigorous academic program, high achievement by nursing students in general education as well as nursing courses, and a positive attitude on the part of college faculty and administration toward the nursing profession have all contributed toward its integration into that setting.

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ARTICULATED CURRICULA AS VIEWED BY ADMINISTRATORS OF FOUR-YEAR NURSING PROGRAMS

Patricia C. Slutzker

A long-standing controversy in nursing education, curricular articulation of two- and four-year nurse preparation programs, has been brought to crisis by three factors.

First, the NLN accrediting body for nurse educational programs, in February 1976, reversed an earlier position by endorsing open curriculum methods and articulation for nurse preparation programs. Secondly, there is an increasing demand for sophisticated nurse practitioners. Legislation for National Health Insurance will compound the need for qualified health workers. The third factor is an uncertain national economic situation and rising health care costs which create sensitivity to cost quality aspects of educational products particularly health workers.

A separate but interfacing issue, state nurse registration licensure exams, further complicates the aspect of educational programs for nurses. Currently graduates of two- and four-year nurse preparation programs write the same state licensure exams, and employing service agencies do not discriminate in utilization of the different program graduates in practice.

Efforts toward resolution of this dilemma in nursing education generate "more heat than light"; hence, ambiguities and duplicity in nurse preparation programs abound. Search of the literature reveals little except a few expository articles from baccalaureate nurse administrators. Assessment of the academic climate relative to licensure and curricular articulation through the views of nurse leaders and policy makers coupled with data from other studies about comparative student characteristics, employment trends and present curricular practices might provide direction for action to resolve this problem. A study was done to gather and interpret views from four-year program nurse administrators. The following research questions were formulated in lieu of hypotheses to guide content of the study:

1. Do baccalaureate program administrators favor curricular articulation, sequential career mobility of the student from the two-year program to baccalaureate preparation?
2. What views are held relevant to differences in the education of the two-year and four-year prepared nurse?
3. Is there theoretical content which is unique to the two-year and four-year programs?
4. What clinical experiences are desirable and/or required at the two levels?
5. Should the baccalaureate program prepare a generalist practitioner or a generalist with a clinical specialty?
6. What kind of practitioner should the ADN program produce as contrasted with baccalaureate nurse preparation programs--generalist or generalist with a specialty?
7. Should different state board examinations be required for two- and four-year nurse students?
8. How do the directors or deans see the practice product of two-year and four-year programs when employed following their education: A. Settings, B. Roles and Responsibility, C. Place in Hierarchy of Health Care Delivery.
9. Is there a difference in perspective of the educational deans and directors of accredited and non-accredited schools?

Baccalaureate program nurse administrators have been reticent about their opinions on this issue even though the National League for Nursing, their accrediting body, published in February 1976 a position paper favoring articulation through open curriculum programs.

The problem of the study was to solicit opinions of four-year nurse preparation program nurse administrators in order to identify barriers to articulation. The sample was selected on the assumption that those in leadership positions would be the most influential of educational policy. The literature provided little guidance so a battery of research questions was formulated that provided a format for a seven-page, 68-item forced-choice statement questionnaire which included requests for open commentary. The objectives of the questionnaire look more at beliefs about whether or not articulation is needed or desirable and possible, not as much as views on how one achieves sound curriculum practices relevant to articulation. Views of licensure status as a separate but interfacing area is included. The content focus of the instrument was aimed at opinions of the respondents instead of factual information. The instrument for the study was pretested in local Indiana schools with nursing programs.

Sample

Questionnaires were mailed to a random sample (N=169) of accredited four-year nurse program administrators and to the total population (N=66) of non-accredited four-year program administrators. Three-quarters (76%) of accredited school administrators and two-thirds (68%) of the deans, directors and chairpersons from the non-accredited programs answered. Refusal rate was high (11%), but one-third of those who refused wrote letters expressing their opinions even though they would not complete the forced-choice questionnaire.

Certain demographic characteristics of the respondents and their institutions are presented below.

Table 1. Sample Description

Characteristic		Percent of Sample (N=132)
Source of support:	public institution	64
	private institution	36
Geographic location:	Northeast	21
	Southeast	25
	Midwest	34
	Southwest	17
	Northwest	2
Enrollment (full- and part-time):	1-100	15
	101-200	32
	201-300	24
	301-600	23
	601-900	7
Other programs existing in schools sampled:	ADN	9
	MS or MN	27
	DSN	4
	Nurse Specialist	3
Highest degree held by administrator/respondent:	BS	1
	MS	26
	Ph.D.	32
	Ed.D.	32
	Other (post BSN)	10

Other categorical information requested from respondents was grade point average and prerequisite courses and experience necessary for student admittance into the nursing major. Respondents' perceptions of advanced placement practices plus the number of students in advance placement were requested to further describe the type of program included in the study.

Prerequisite experience in the form of a high school diploma or its equivalent was necessary for matriculation in almost all (92%) of the programs. Practical nurse experience was required in only one percent of the programs; a few (6%) of the four-year programs in the study accepted only students who had already been licensed as registered nurses and were seeking the baccalaureate degree.

Academic courses prerequisite for entrance into the nursing major of the baccalaureate nurse programs were reported by all programs. Subjects commonly required included chemistry (87%), anatomy and physiology (84%) and psychology (84%). These were the major prerequisites in the majority of schools with almost as many requiring sociology (80%) and English (79%). Anthropology was necessary in more than a quarter (29%) of the programs. In the category of "other courses," respondents from a small percentage of programs required courses in a great variety of subjects including nutrition, microbiology, bacteriology, entomology, zoology, applied ethics, history, urban studies, medical physics, marriage and family, political science, English literature, speech and group communication, math, algebra and statistics.

Grade point average as a reported prerequisite for entrance into the nursing major of the baccalaureate programs was translated to a 4.0 scale for computer analysis. As shown in Table 2, the lowest grade point average prerequisite was at "C" letter grade, although seven percent of the programs had no required grade point average for admittance.

Table 2. Grade-Point Average Prerequisites

Letter Grade	GPA on a 4.0 Scale	Percent of Sample with Requirement
	0	7
C	2.0	30
	2.2	2
	2.3	10
	2.4	2
C+	2.5	31
	2.7	5
	2.8	5
B	3.0	7
B+	3.5	1

Nurse educators' perceptions of practices designed for advanced placement of qualified students in their baccalaureate programs were solicited. Nearly the total group of respondents (96%) stated that credits were transferred to their program from another institution. Further data showed that seventy percent of the schools transferred credit from another program into the existing baccalaureate program and challenge examinations for credit were accepted in even more (85%) of the sample schools. Academic credit through evaluation of work experience was accepted in only one seventh (14%) of the sample schools while more than a fifth (21%) reported an agreement with an existing two-year nurse program for credit transfer.

However, when queried about their perceptions of the number of students currently in advanced placement, one-third of the respondents (34%) stated that there were none. Just over half (51%) reported from 1 to 50 students in advanced placement, almost one-tenth (9%) reported 51-100 students and only six percent of the respondents claimed that their programs had over 100 students in advanced placement.

Findings appear incongruent when practically all the respondents believe that advanced placement practices are utilized in their programs while one-third of the programs have no accelerated students and over half the sample schools report only between one and fifty students in advanced placement currently.

Findings Pertaining to Forced Choice Type Questionnaire.

The momentum of the articulation issue has been increasing since 1971. Leaders of associate degree nurse programs have frequently stated their opinions and philosophies, both in the literature and verably favoring articulation in nursing education. To date baccalaureate nurse leaders have not spoken out on this issue. The format for this opinion survey was deliberately constructed to avoid middle-of-the-road opinions and nebulous answers. Respondents were given the choice to agree or disagree with flat statements both for and against articulation. Respondents were asked to comment on the nature of the format and many did: almost one-third (30%) stated that they did not like the forced choice method, half that many (16%) did like it, and the remainder (54%) had no comments at all. Some verbatim comments written in by the respondents included "ambiguous," "good questionnaire but I had to qualify some answers," "interested in your results, one of the better ones I've filled out," "no room for gradations of agree and disagree," "well organized, some questions repetitious," "simple and easy to do," "my responses were sometimes ambivalent because of what is real versus ideal," "guess you made me a little angry," "the forced choice was difficult," and "did not appreciate the forced choices, there are shades of gray."

Refusals

Content validity was partially demonstrated when themes from written commentary and opinion letters from refusal respondents matched the research question content. The reasons of those who did not wish to participate in the study ranged from ill health, paucity of time, no dean or a new dean enroute to doing an accreditation report.

Over one-third of those who declined to complete the questionnaire sent letters explaining their views of the articulation issue and expressed dislike of the forced choice statements. Themes from these letters revealed that on the whole most refusal respondents subscribed philosophically to the notion that "any student has the right to change his or her goals from that of a two-year graduate to seeking further education." Another common quote from the letters, "as a student moves from one type of program to the other, we should make every effort to capitalize on previous learning" but "a mechanistic, structural organization of the two curricula does violence to the internal integrity of a generic (four-year) program." "For the individual student who might qualify to go on, measures of appraisal were inadequate so the problem remains as one of identification of deficiencies." "Associate degree or two-year programs should be excellent in and of themselves in preparing a large cadre of participants in nursing, but it is

hard to see how a safe practitioner can be prepared in two years with a sound science foundation." These letters fell in accord with statistical results from the questionnaire and, while demonstrating concern, identified the conflict which the educators felt between philosophical attitude and action.

Themes from Written Comments

Due to the narrow content of forced choice statements, respondents were asked to state and summarize their opinions. Eight returned questionnaires had no comments while other respondents not only used space provided but added pages, sometimes typewritten. Conflict and concern were frequently in evidence.

One major theme that evolved was that articulation was a desirable goal but should be implemented on an individual basis rather than at the curricular level. They stated that terminal educational programs were against the values of a democratic society. Diversity, multiple entry, the options to accelerate or decelerate in educational preparation was cited as a major attraction of nursing education. Implementation of articulation of two-year and four-year nurse preparation programs was seen as "impossible," "pessimistic," "ideal but don't believe it will happen in my lifetime" and "wasteful."

Statements about the differences in the two educational programs were gleaned from comments. Baccalaureate or four-year programs should be built on a strong liberal arts base and articulation of the two programs required an attitude change for the student that was difficult if not impossible to attain. Several respondents noted that the manner of thinking, depth and emphasis of knowledge was different but that competency levels were not defined. Additionally no program is consistent; for example, "some practical nurse programs, one-year, were really associate degree study, two-year and some baccalaureate, four-year programs were associate degree education." Public confusion was noted.

Vague reference to the difference of baccalaureate nurse education resulted in the second major theme from all the nurse educators. Baccalaureate nurse skills extend in kind and number from those of the associate degree nurse, but data is needed to validate and support the role and appropriate education for the baccalaureate nurse. Some called for a general (universal) standard of education, established nationally by the National League for Nursing which could be used by any program. Others wanted statewide plans that would gather data, define schooling and job descriptions for both levels to facilitate a true articulation. All agreed that the nursing profession should decide areas of competencies of both level graduates. Concern was evidenced that "two-year programs because of financial backing, low tuition, and open admissions see themselves as leaders while baccalaureate educators spend much time theorizing but have no definitive guidelines."

A few suggested implementing baccalaureate nurse education like medical and dental education. Two-year program graduates would be nurse associates or assistants, not nurses, like physicians assistants and dental assistants' relationship with doctors and dentists; they would work under the supervision of the professional (four-year) nurse. Licensure and legal certification would be changed to accommodate them.

Several nurse educators favored regional consortia of schools as a structure for implementation of curricular articulation. This would enhance relationships between clinical settings, hospitals and community health agencies and institutions of higher education; however, "because nursing is relatively new to academe, educators do not comprehend our multiple entry level. In addition, educators see only hospital nurses--the sick nurse."

Findings Relevant to Research Questions (See APPENDIX TABLE.)

Research question #1--whether or not four-year nurse program administrators favor articulation--was answered from a positive frame of reference with about three-fifths (62%) of the sample population philosophically in agreement.[1] With regard to research question #9, there is no difference in perspective between administrators of accredited and non-accredited programs.

Research questions #2, #3 and #4 requested the respondents' viewpoints about theory and clinical practicum, both components of any professional educational syllabus. The nurse administrators agreed that there was theory and clinical experience unique to both levels of nurse preparation and that theoretical concepts were carried to a more advanced level in baccalaureate than in associate degree programs. Preparation for management, leadership and research belonged primarily in the four-year programs.

Yet, when asked to specifically agree or disagree in basic content areas, they did not differentiate as to which part of the curricula was unique at either level. Psychosocial concepts, theories of growth and development, nursing process theory and epidemiology were cited as appropriate for both programs. Nurse administrators were also in conflict regarding clinical practicum settings and clock and credit ratios for the two programs. No theoretical content or clinical experience was identified as unique. The only generalization cited was that baccalaureate programs should be more advanced in theory and practicum than the associate degree program.

Research questions #5, #6 and #8 requested the respondents' view of employment utilization of the respective program graduates--where each graduate should practice (hospital or community), whether the nurse would be a generalist or specialist, the place of the teaching role in practice and whether the practitioner would operate in technical or professional function. The data suggest that four-year programs prepare a professional generalist, not specialist, who has competencies to assume leadership positions in both hospital and community agencies. Uncertainty was evidenced about whether two-year graduates should be employed in hospital or community agencies, but the data implied that graduates from both programs should teach patients and co-workers.

The baccalaureate nurse was described as a generalist, although not a clinical specialist. When asked if associate degree nurse is a generalist, there was no concensus (56% yes, 41% no). A majority (89%) validated that the words technical, associate and professional, baccalaureate went together although individual definitions of practice may vary.

Although a large majority (91%) felt that two-year graduates should not do research, only two-thirds (69%) agreed that four-year graduates should do beginning research, and less than half (47%) thought he/she should practice independently.

Most respondents (86%) felt that associate nurses should not become directors and teachers, and many (62%) felt that they should not work as head nurses and supervisors.

Two items referred to supply and demand: one referred to the job market for nurses soon to be flooded, and the other said that there were sufficient numbers of nurses but that geographic distribution was uneven. Both statements had split almost even percentages of agree/disagree.

In each state the same State Board examinations were written by graduates of both programs for legal registration to practice so a battery of statements were given to answer research question #7. Should different examinations be required for licensure of two-year and four-year nurse graduates? About nine out of ten respondents favored separate licensure for the graduates of each program. Respondents were about even on their view of whether organized groups outside nursing are advocating separate licensure (47% yes, 36% no).

Discussion

Overall the study results show that administrators of four-year nurse preparation programs philosophically favor articulation and career mobility programs in nursing; but they are in disagreement, opposed or uncertain as to how implementation might be effected. An incongruence exists between attitudes and practices. Opinions of respondents indicated grave concern regarding this professional issue.

This project was a tight, narrow study; it validates the degree of confusion and conflicting viewpoints prevalent about curricular articulation and career mobility in nursing education. Not only do four-year nurse leaders show incongruence in attitudes one from the other, but many respondents revealed a large degree of internal intrapersonal conflict. Several respondents noted, "I am contradicting myself." This internal struggle must affect the decision-making of these nurse administrators in areas of policy and its implementation. With more knowledge about cost, quality of educational programs, employment practices and the needs of the public for nurses, personal conflicts may be resolved resulting in a good climate for clarifying action.

Over one-third of the programs reporting have no advance placement students, but ninety percent of the respondents reported policies in effect at their institutions favoring advanced placement students. Interpretation of these data is difficult. There may be multiple factors involved, however; respondent's conflicts about philosophy and practice as evidenced by other data in the study led to the inference that one barrier to implementation of advanced placement policies is the divergence in nurse administrator's reported attitude and behavior.

Some of the barriers to students seeking career mobility may be real operational situations such as lack of qualified faculty and clinical laboratories. Other reasons may reflect the philosophy-action conflict revealed by the study. Statistical cross tabulations gave no significant correlations between size, type or location of school and advanced placement practices. It is difficult to identify barriers or seek clues to the reason that so many nurse administrators think they have advanced placement but state that in spite of the policy there are none or few students in that status. The instrument used to solicit data is not designed

with sufficient sensitivity to extrapolate clues to causation, only opinions and conflicts. Nurse administrators of four-year nurse preparation programs in the United States indicate perceptions of differences in curricula of two-year as compared to four-year nurse preparation programs but are unable to clearly define specifically what the difference is. Study findings show lack of clarity in these views about both theoretical content and clinical practicum for the respective programs.

Study results show that this conflict between policy and practice is broadly distributed over the national sample of both accredited and non-accredited four-year nurse preparation programs according to the views of their administrators. Anger and anxiety were reported as the questionnaire revealed this situation to the individuals who completed it. Perhaps when the magnitude of the dissonance is known, nurse educators will have strong impetus to resolve the articulation and career mobility issue in nursing education.

Recommendations

Several courses of action for resolution of the articulation and/or career mobility issue in nursing education evolved from the findings and conclusions of this project. Primary areas of agreement among respondents were philosophical favoring of curricular articulation and separate licensure examinations for two- and four-year program graduates. Based upon this data, it is suggested that serious consideration be given to the construction and use of different and separate state exams for the respective program graduates. It is further urged that nurse educators not only participate in this task but provide leadership. Obviously this adjustment must be reflected in the design and implementation of a curricula relevant to the different programs.

In order to carry out the second area of respondent agreement, curricular articulation, information must be obtained from two quarters. First, data must be gathered that ascertains the views of the large group of practicing non-degree nurses. Determination of the needs and career goals of this large cadre of potential candidates for articulated nurse preparation programs is needed. Recruitment of qualified candidates from this group could produce expert nurse practitioners, nurse teachers, administrators and researchers in two years less than through traditional four-year baccalaureate programs.

Secondly, immediate design and construction of methods to measure the influence of liberal arts education in clinical practice should be undertaken by nurse educators. The value of liberal arts education in other academic fields has not yielded to measurement methods. The close relationship in nursing between theory taught and observable clinical practice is a factor in nursing education not evidenced so succinctly in other fields, giving nursing a distinct advantage for the design of evaluative techniques.

Provocation and grave concern for nursing education's future was expressed by the sample population. The instrument used for data collection was not sufficiently sensitive to give clues to the etiology of this lack of alignment of philosophy and action. Based upon study conclusion, it is recommended that each nurse administrator analyze and define the degree to which stated educational policy is implemented in his/her program. Once the situation clarifies, definite action to match policy and practice should ensure, resulting in some relief of public

confusion about utilization of two-year and four-year nurse graduates.

Study results and review of the literature about curricular articulation indicate the lack of involvement of that large group of practicing non-baccalaureate nurses who have the most to gain or lose when the issue is resolved. The era is rapidly fading wherein educators decided independently, without society's and student's views, what type and length of educational program was appropriate. Input about the practice needs, career goals and life aspirations of non-degree staff nurses combined with the expertise of nurse educators is needed. There is little evidence that this group, the bulk of practicing nurses, have been invited to the conference table. Research to ascertain their views and needs is imperative before decision making toward resolution of articulation can proceed.

FOOTNOTE

1. All statements for and against articulation were identified, collated and an average of percent of agreement and disagreement was calculated by grouped items. This statistical measure was developed in consultation with Fred Widlock, statistician, Research Department, School of Nursing, Indiana University, Indianapolis, 7/25/77. It obtains a broader though less detailed and accurate account of the data.

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APPENDIX TABLE: Selected Statements from Questionnaire, and Percent of Respondents who Agreed with Each. (Mean number of respondents/item = 94)

Statement	Agree %
Theory	
There is theoretical content unique to the associate degree program and baccalaureate program respectively.	83
Theories of growth and development belong only in baccalaureate education.	7
Psychosocial concepts are essential at any level of practice.	97
Nursing process is best understood by students in the beginning of two-year programs.	15
Evaluation of nursing intervention can be done only by the baccalaureate-prepared nurse.	22
Epidemiology belongs in the associate degree program.	29
The above theoretical components are carried to a more advanced level in the baccalaureate program as compared to the associate degree program.	90
Only the baccalaureate student needs to be oriented to research.	64
Management and leadership courses only in the baccalaureate programs.	69

(Continued on next page.)

Statement	Agree %
Clinical	
Clinical experiences are different at associate and baccalaureate levels.	89
Nursing care plans are used at both levels of nursing practice.	94
Psychosocial aspects of nursing should be emphasized clinically only in baccalaureate programs.	5
The two-year program emphasizes more procedures, techniques and task than the four-year program.	71
The same ratio of clinical laboratory clock hours to credit hours is appropriate in both technical and professional programs.	57
It is unnecessary for associate degree nurses to have clinical experiences in the community as well as in hospitals.	48
Focus on promotion of health and prevention of illness is emphasized more in baccalaureate education.	86
Episodic care is the main focus in associate degree programs.	80
Practice Post Graduation	
There are enough nurses to meet society's needs but geographic distribution is uneven.	55
The baccalaureate program prepares a generalist in nursing practice.	94
Associate degree nurses are prepared to practice in the community as well as in the hospitals.	9
The baccalaureate practitioner has competencies enabling them to assume leadership positions in community and hospital nursing.	84
Associate degree nurses work only in hospitals and nursing homes.	35
Baccalaureate programs prepare clinical specialists.	2
The job market for nurses will soon be flooded.	44
The baccalaureate graduate nurse should do beginning research.	69
Associate degree nurses are capable to practice in any setting.	5
Only the baccalaureate graduate should teach patients and co-workers.	22
The two-year nurse is capable of teaching patients and co-workers.	63
The associate program produces a generalist in nursing care.	55
The associate program produces a technical nurse, as contrasted to the professional nurse from baccalaureate programs.	89
The two-year graduate should do beginning in nursing.	6
The baccalaureate nurse should practice independently.	47
AD nurses and BS nurses do group patient teaching.	64
Associate degree nurses may become head nurses and supervisors.	32
Associate degree nurses may become directors and teachers of nursing.	8
Licensure	
Credentialing procedures and state board examinations should contain a practice component in nursing.	33
Credentialing could be accomplished through continuing education programs in lieu of academic preparation.	18
Separate licensure examinations should be devised for certification as a technical or professional nurse.	89
State Board scores are acceptable means of validating previous learning experiences.	24
There should be different state board licensing exams for graduates of associate degree and baccalaureate nursing programs.	91
Present state board examinations can accommodate both levels of nursing because the goal is to measure minimum safe practice.	31
Different state board examinations should be required for associate and baccalaureate graduates as technical and professional respectively.	83
Organized groups outside of nursing advocate different credentialing for technical and professional nursing.	47

THREE PROGRAM EVALUATION DESIGNS

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The Challenge of Naturalistic Inquiry

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A Quantitative Determination of Program Impact: A Proposal

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A Comprehensive Evaluation: Measuring Product and Process

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THE CHALLENGE OF NATURALISTIC INQUIRY

Alan Gorr and Sherry Johnson-Soderberg

Naturalistic inquiry (N/I) is an umbrella term which refers to a varied collection of methodologies. These methodologies commonly aim at the production of hypotheses by careful description of the situations under study. Such methods are used to elicit operative structures by which an educational situation may be analysed.[1]

This form of inquiry is not useful for all evaluative studies. For example, there are evaluations which assess the implementation of a program according to a timetable--or which analyse the attainment of certain relatively fixed goals. In such situations, N/I may be of limited value. But in studies of programs where goals and their concomitant strategies are neither fixed nor fully known, N/I is a useful alternative. In these situations, far from imposing control on a situation, the investigator has little knowledge of whatever confounding variables may exist or what controls to consider. The more formal evaluation schemes, because of their detailed structure, are inappropriate where small numbers of students (in this case, nine) and emerging programs are involved. In effect, the evaluator would spend more time observing the structure of the evaluation than the nature of the program. N/I is useful where there is reason to believe that pre-formulated hypotheses cannot provide valid insights into the situation under study.

We begin this paper therefore with a challenge to the audience concerning the findings which will be presented at the end. Between now and the end of the presentation, we would like you to predict the answers we found. These findings, we believe, are characteristic of those which may be uniquely elicited using N/I techniques.

1. What do BSN completion students think of nursing as an art and a science? What impact should such views have on the curriculum?
2. How do students react to the statement: "Nurses care and physicians cure." How does this view interface with the curriculum, student/faculty relations, and the practice of nursing?
3. Which do students feel more deficient in, physical or social sciences, and why? What does this suggest to the curriculum planner?

In presenting a report on a topic such as N/I, we run afoul of two problems. The first is the necessity to in some sense work backwards, forming one's own conclusions and at the same time convincing the audience that they were not the hidden agenda from the start. Second, the questions of the contracting party--in this case the faculty of the Rockford site--must be incorporated as data. The insurance that the questions and their answers arose out of the data comes from techniques of first asking subjects the most general questions about their concerns in order to establish initial categories. Then these categories are cross-checked among several interviewees in order to establish an accurate description of the various viewpoints.

Clearly, such issues may not be treated in a vacuum, even for the purpose of presentation. A description of the program and the situations in which they arose is therefore in order.

The Baccalaureate Curriculum

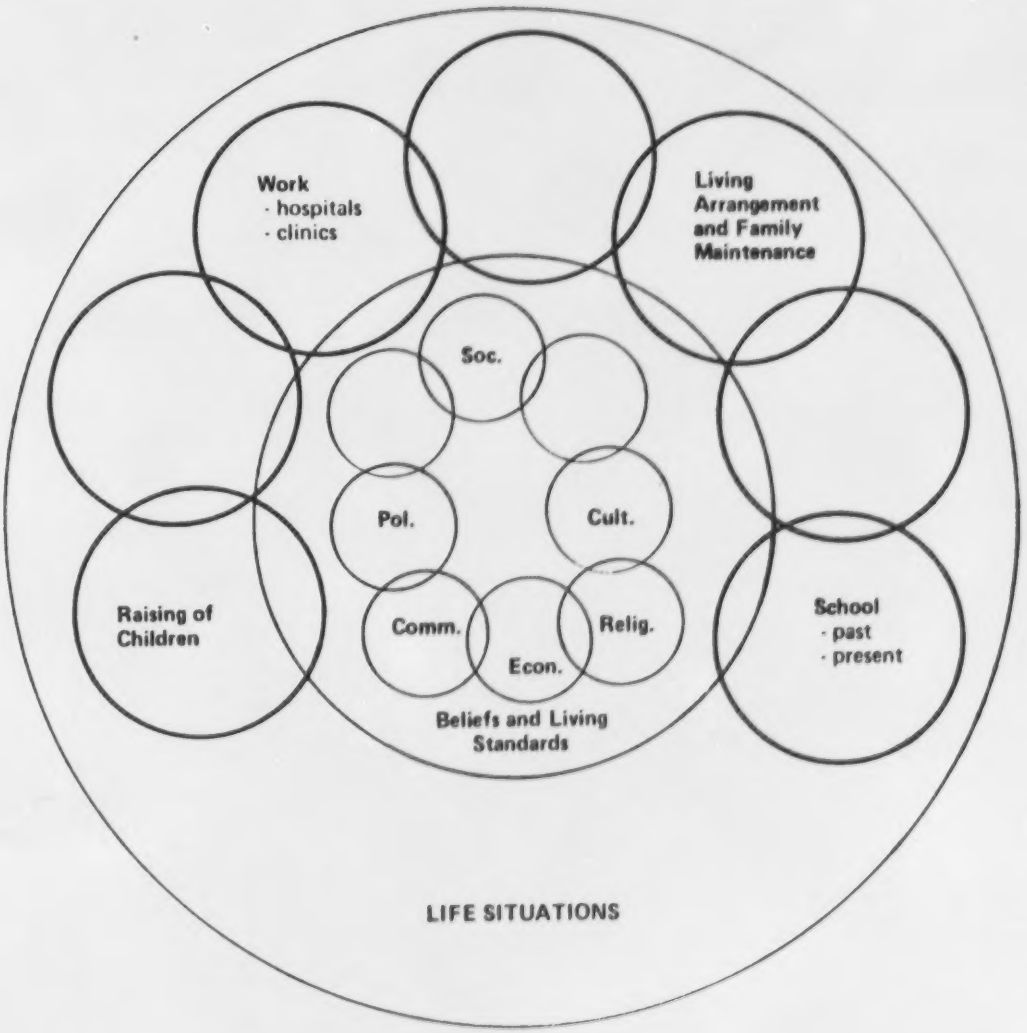
The University of Illinois College of Nursing baccalaureate completion program at Rockford is both limited to and adapted to the needs of the registered nurse student who is continuing formal education. Modifications in content and delivery of the courses are intended not to detract from, but to enhance the final goal of the University program, that is, to graduate professional nurses who meet the terminal objectives of the College. The curriculum structure is based upon the background of mature adult learners who have already practiced nursing at the technical level. (See Figure 1.) However, their experience has been chiefly within hospitals and clinics with emphasis in acute care situations.

The progression of these individuals into baccalaureate level professional nursing is viewed as expansion both in breadth and in depth of learning. The depth is demonstrated in enhancing abilities to utilize the nursing process and the six curriculum strands which comprise upper division nursing content: 1) assessment; 2) communication; 3) decision making; 4) leadership/management/planned change; 5) health care teaching; and 6) research and evaluation. (See Figure 2.) These six process areas are taught with increasing complexity, in relationship with each other, and in a nursing context as the student progresses. These processes are viewed as the tools for developing and using present as well as future knowledge. Theories which inform the nursing process and related areas are taught concurrently with the process threads. (See Figure 3.)

The increased breadth enhances the learning of students in primary care, family, community and group settings. Students also have an opportunity to elect an area of concentration in which they can improve their process skills while expanding their understanding of subject content in this area. (See Figure 4.)

Method and Outcomes

The methodologies of Naturalistic Inquiry borrow in one fashion or another from sociology, anthropology, phenomenology, educational psychology, and perhaps investigative journalism. The method we use began as an application of Malcolm Parlett's "Illuminative Evaluation"--one school of what is broadly called Naturalistic Inquiry.[2] Parlett's method stands in reaction to what he calls the "agricultural botany" model of evaluation which uses hypothetico-deductive methodology. Because of the complexity of the learning environment, methodologies which ape the biological and physical sciences cannot control the teaching/learning situation and isolate variables. The results of such studies therefore contain confounding variables. This tends to invalidate the research design and, for that reason, results are ultimately ungeneralizable. Moreover, in the area of quantitative evaluation, one must be careful not to confuse statistical significance with the actual importance of an issue. It is possible to gather powerful statistics without establishing their real value. Thus N/I becomes an important partner in the evaluation process. It can generate hypotheses and a feeling for their value. These may later be tested in more quantitative ways.



ADULT NURSE LIFE SPACE

Figure 1

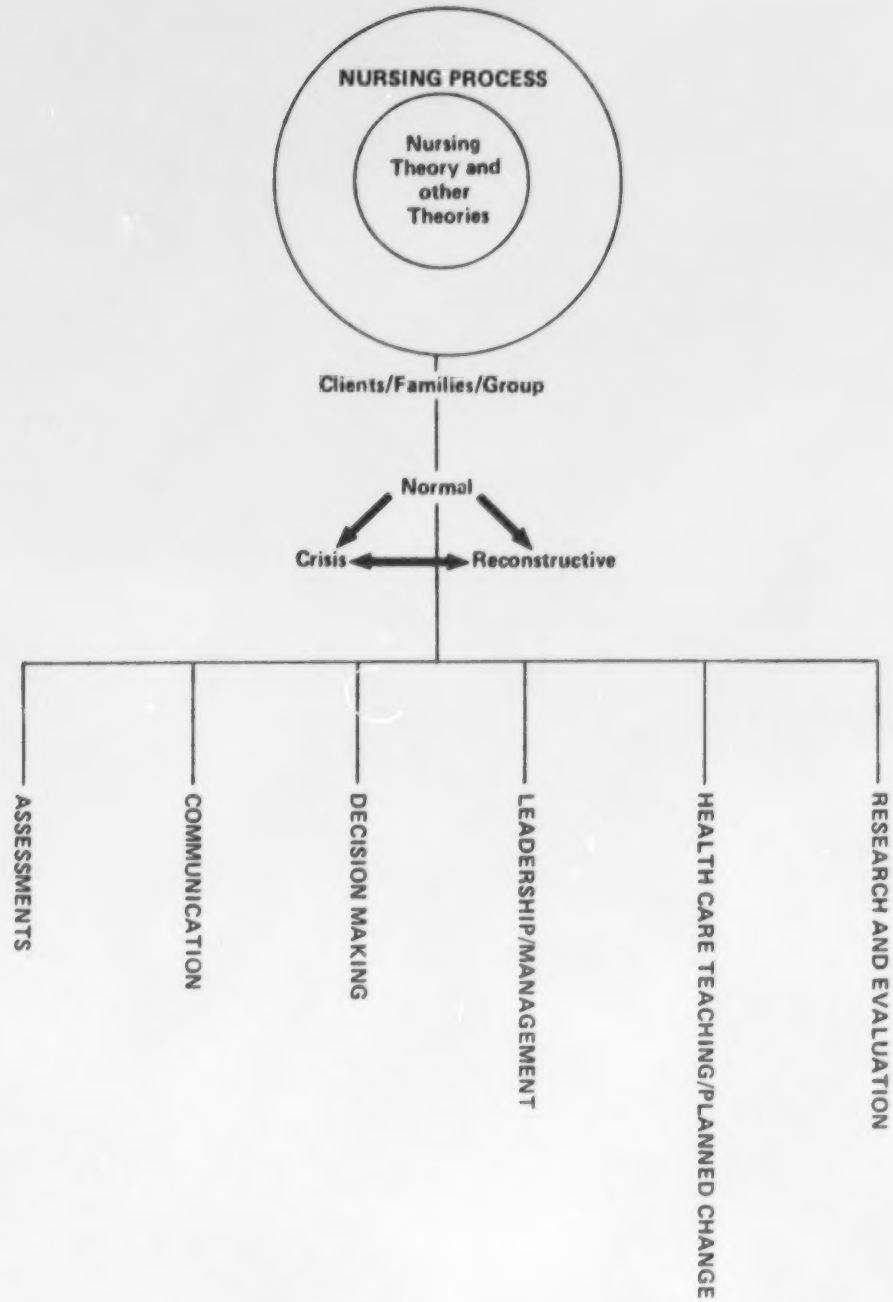

NURSING PROCESS
Nursing Theory and other Theories
Clients/Families/Group
Normal
Crisis
Reconstructive
ASSESSMENTS
COMMUNICATION
DECISION MAKING
LEADERSHIP/MANAGEMENT
HEALTH CARE TEACHING/PLANNED CHANGE
RESEARCH AND EVALUATION

Figure 2

UNIVERSITY OF ILLINOIS ROCKFORD SITE

CURRICULUM MODEL

NURSING PROCESS

NURSING AND RELATED VIEWS

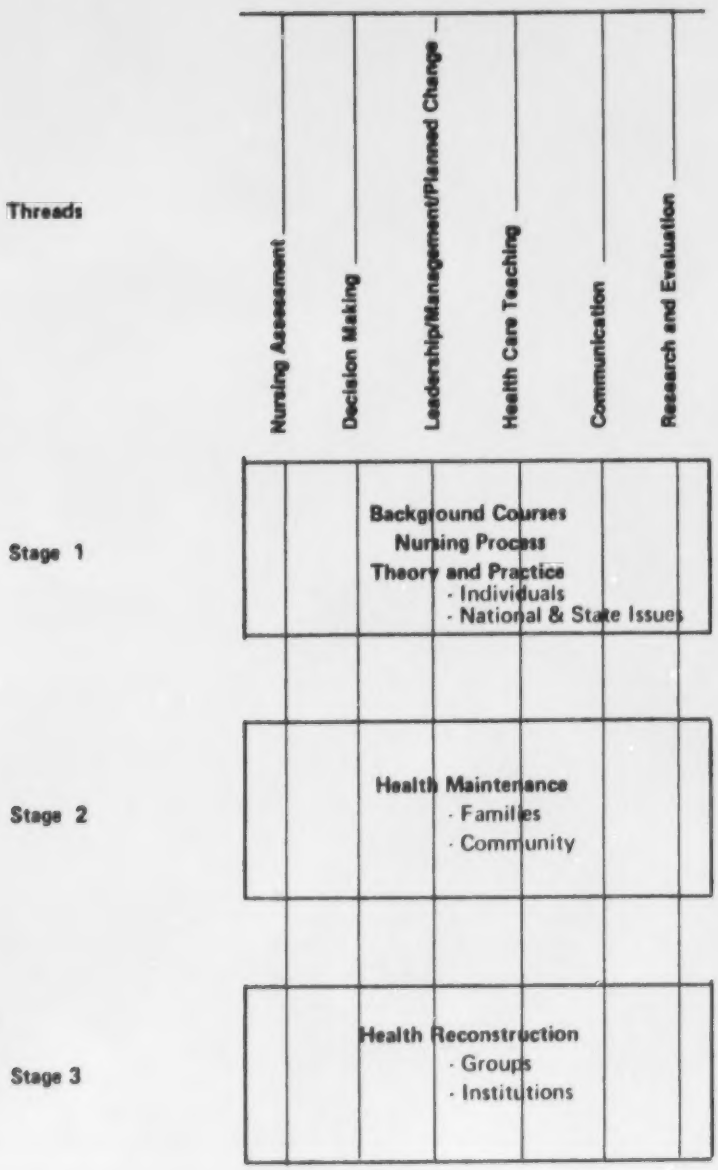


Figure 3

DIAGRAMATIC VIEW OF STAGES--UNIVERSITY OF ILLINOIS BSN COMPLETION PROGRAM

ROCKFORD SITE

	Humanities	Social Science	Natural Science	Other	Nursing	Total
Stage I	L. D. Humanities 6	Intro. Psychology 3 Intro. Sociology 3	General Chemistry 3 Organic Chemistry 3 Zoology-Biology 4	English 6 L.D. Elective 2	None if R.N. program completed 0	30
Stage II		Human Development 3 Learning & Teaching 3	L.D. Anatomy } 7-8* L.D. Physiology } Microbiology 3 Biochemistry 3	Nutrition 2 Intro. Statistics 3 Management 3	Adult Nursing PEP } MCH Nursing Test } 21 Psych Nursing } (Awarded after CN-I)	48-49
Stage III	U.D. Humanities 6	Family Course 3 Culture Course 3 (One or both U.D.)	U.D. Human Physiology 3* Natural Sci. Elective 3	U.D. Elective 3	(See below) 28	49
Total for Graduation:	12	18	26-27	19	49	

L.D. = lower division
U.D. = upper division

*Some flexibility/substitutions permitted among these three courses

Total for graduation: 125

Nursing Sequence

	Fall Semester	Spring Semester
Year 1	Nursing Issues and Trends 3 Public Health Science 2 Biochemistry 3	Clinical Nursing I: Nursing Process 6 Applied Physiology 3
Year 2	Introduction to Research 2 Clinical Nursing II: Health Maintenance 6	Clinical Nursing III: Health Reconstruction 6 Elective or Independent Study in Nursing 3

Figure 4.

The important stages of Illuminative Evaluation are contracting, determination of Ideas-in-currency and progressive focusing. Considerable time is spent on the process of negotiation between contractor and evaluator, ensuring that the contractor's concerns are adequately specified. In this particular instance, the contract was purposely left quite general. The faculty felt that the educational process (as opposed to structure) which the students were about to enter was the paramount consideration, and they wished information on student perceptions in this area to compliment their own. It was felt if there were answers to the following questions, the issues of programming would then become clearer. Accordingly the evaluators began with three questions as a general guide:

1. To what extent is the student aware of the nursing process expectations to which she is being exposed?
2. To what extent is she able to articulate these expectations?
3. To what extent is she able to criticise these expectations and to evaluate her relationship to them?

The method for collecting data has until now mainly been the interview. Each of nine students has been interviewed individually for two, forty-minute sessions. We have also interviewed faculty extensively, visited classes, and conducted group discussions. The first cycle of interviews was conducted before school began in order to gather preliminary information about the student body and faculty.

Illuminative Evaluation begins by looking for Ideas-in-currency. That is, the evaluator asks sufficiently neutral questions to learn what ideas are important to the interviewee. These are loosely organized or, as Parlett says, "bundled." The next step is termed progressive focusing. This entails asking questions which approach the same topic from several different angles, thus bringing the issues into sharper definition. The same process is applied across the range of persons being interviewed in order to highlight differences in points of view. In the end, each person should feel that his or her point of view will be well represented in the report which emanates from the study. This requires detailed and an often exhaustive an exhausting amount of cross-checking. But having accomplished this, the evaluator can use the newly defined issues as a question for further inquiry. Issues which came to be of importance as a result of the first interview were:

1. The role of nursing in the health care system.
2. The quality of patient care.
3. Preventive halth care.
4. Patient autonomy.
5. Alternative forms of health care delivery.

Concerning the actual observations gleaned from the interviews, there is not time to do justice to them here. N/I requires extensive descriptions of the institutional and ambient social structures, information about the student body and the conditions of learning. The list could go on. Suffice it to say that for purposes of illustration, and not elicited by N/I techniques, the students may be described as usually capable as evidenced by ACT/PEP performance and academic record. They are in their late twenties in average age and tend to have many

familial obligations. In addition, they appear to be open minded, highly motivated, and mutually supportive--adjectives which telescope the findings of a number of interviewees. But having set the scene, let us turn to two vignettes which we believe are representative of the information which one can gather from N/I.

The first concerns the nature of nursing practice as seen by entering students before classes began. When asked about the quality of patient care they had observed and what they thought the BSN might contribute to that care, most students felt that the baccalaureate nurse was less mechanical in approach to patient care, and could "see through the fog." This nurse could deal effectively with ambiguities and help educate patients in the prevention of health problems and alternative ways of caring for themselves. When asked whether nursing was an art or a science, most students felt quite emphatically that it was an art. They felt that the practice of nursing did not follow the laboratory model they had learned from the physical sciences, and therefore had to be considered an art because " ... it is so hard to generalize."

When a member of the faculty was asked for her impressions of this viewpoint, she responded that the students had a "barrier to abstraction. They don't want theory to replace their intuitive skills. As they move into their studies, they should come to realize that their intuitions are the beginnings of induction. Eventually they should come to see that art and science are complimentary to one another--not mutually contradictory as they thought when they entered the program."

Halfway into the first semester, students were remarkably subtle in their answers to the question of nursing as an art or a science. One student said, "Perhaps this (art) is true in the (nursing) profession, but not in my mind. It may be that we haven't arrived at absolutes and that makes it a soft science. But even the laying on of hands can be a science." Such an answer is representative of a substantial change in student attitudes arising from the use of N/I as an interactive technique.

A second observation concerns the perceived adequacy of entering students' preparation in the physical and social sciences. (See Figure 4.) While they disagree as to which of the biological sciences they need more of, all felt some inadequacy in this area. The picture is not the same in the social sciences. Owing to their heightened awareness of nursing in the larger social environment, many students evinced interest in political science, economics, and anthropology. None felt great inadequacy in the area of sociology or psychology. They felt their preparation to be on a par with social workers (including MSW's). This is important since they also felt that their function, in addition to their nursing duties, was identical to that of a social worker. Interpretations of this observation have been as varied as the number of people with whom it has been discussed. Nurses unrelated to our project remarked, "It is a commentary on the low esteem in which social workers are held," and "They have found little they can apply in the social sciences."

Our interpretation is that having learned Maslow's hierarchy of needs, Kubler-Ross' stages of dying and Erickson's ages of man, they really do believe that they have exhausted the social sciences. As a litmus test of students' sophistication in this area, the evaluator explored the subject of misattribution of arousal from the field social psychology and found it to be almost

universally a new subject which the students did find useful. Perhaps there is a need to survey the social sciences in such a way that the student is left with a not on of what remains to be learned.

As regards the question of whether physicians cure and nurses care--a notion which many doctoral students take to be axiomatic--reactions of all but one of the BSN completion students ranged from "baloney" to "bullshit."

Deriving from the initial contract for evaluation, the faculty have developed a more specific list of evaluation questions. These include:

1. What are the limitations and advantages of a small program which is part of a large university?
2. What instruments are available to measure variables in a beginning program?
3. Do students and faculty need to understand the curriculum in order for it to succeed?
   a. How can we teach them about it?
   b. Do they see the need to understand it?
   c. Are they able to act on it?
   d. Can they articulate it?
4. What are the advantages and disadvantages of having a BSN completion program rather than including the RNs with generic students?
5. What is the best way to develop this evaluative research study?
6. How can we integrate the students' personal needs and the needs of the curriculum?
7. Is it possible to utilize the same terminal objectives with different means of achieving these objectives? How does the end product look?

Questions dealing with the necessity to understand the curriculum process were developed in conversations between evaluators and faculty. We agreed that many programs do not require that students understand the organizational principles of the curriculum in order to receive its benefits. But both faculty and students agree that in a curriculum where the process and progression of topics is at the heart of the matter under study, by rights they should and do know the structure and function of the curriculum. Both groups find the curriculum categories most useful in dealing with the subject matter, and both can evaluate themselves relative to the curriculum goals.

Questions concerning the Rockford completion program relative to other alternative ways of designing the curriculum will require additional evaluation tools. These will develop out of N/I and will merge quantitative and qualitative measures. As the curriculum unfolds, clinical simulations such as Patient Management Problems (PMPs) may be developed to determine the success of the curriculum relative to its own internal criteria as well as to compare it with other programs--including those within the College of Nursing.[3]

As an additional and tentative point, the evaluators have been exploring a new method of inquiry at Rockford. It involves observing patterns of student questions. During a visit to a class in Nursing Issues, it became apparent that students were more tentative and less patterned about the positive statements they made than about the questions they asked. Since that time, several class and faculty meeting situations have been used to explore a methodology which is just beginning to emerge. With it, one may be able to develop a new "window" by which

we might learn the cognitive patterns and structures which students and others use in approaching a problem. The method involves asking people what questions they would ask another person in order to ascertain something. For example, "What would you ask of another nurse in order to determine if he or she were sensitive to the client's value system?" or "What questions would you ask of another nurse in order to determine whether a client care plan was adequate for a given post-operative procedure?"

The priorities and patterns which emerge from the questions can then be used to guide further questioning. To repeat, this method is just in its developmental stages. But it illustrates the dynamic nature of the possibilities which may arise out of the use of Naturalistic Inquiry.

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A QUANTITATIVE DETERMINATION OF PROGRAM IMPACT: A PROPOSAL

Samuel T. Hughes, Jr. and Dorothy J. Turpin

Throughout the United States there are many diploma and associate degree graduates (registered nurses) who are interested in or pursuing studies toward a baccalaureate degree in nursing or other field of study. This increasing demand for additional educational preparation and the anticipated level of entry into professional nursing practice, led the nursing faculty at the University of Texas at Arlington School of Nursing to develop an alternative route for registered nurses enrolled in the baccalaureate nursing program. This alternative route became a pilot project in the spring of 1977 and was titled, The Individualized Plan for Evaluation.

Since the inception of the Individualized Plan for Evaluation, 157 registered nurses have completed the baccalaureate degree in nursing. These graduates have participated in follow-up program and curriculum evaluation six months after completion of their course of study. The six-month follow-up focused primarily on their current employment status and whether or not the nursing concepts presented in the curriculum were of any value in their present work situation. In addition to this information, the nursing faculty have been concerned and interested in the effectiveness of this alternative program. Therefore, they indicated that an evaluation plan should be developed and implemented to determine the effectiveness of the course of study in effecting change in the participants' skills, knowledge and behaviors at the conclusion of the program.

Individualized Plan for Evaluation

The Individualized Plan for Evaluation, a pilot project, has been developed for registered nurses wishing to obtain a baccalaureate degree in nursing. The program uses planned classroom activities, independent learning, and individualized clinical experiences to achieve undergraduate program objectives. Through the use of these learning methods the student will be able to complete the upper division nursing degree requirements in one year.

The philosophy and conceptual framework of the School of Nursing, undergraduate program objectives, and level objectives are used to identify classroom and clinical learning objectives. Clinical experiences in acute care and community agencies are selected by the individual student to meet the level objectives. Individual learning objectives are written by the student for each clinical experience.

Classes are held one night each week for five hours. There is a two-day orientation session at the beginning of the fall and spring semesters. Outlines of content to be presented in the classroom are provided for each class session. Clinical experience hours vary according to the student and the objectives to be accomplished. A faculty advisor is assigned to each student and a one-hour student-faculty conference is scheduled each week. Clinical skills necessary for safe nursing practice are assessed in a simulated laboratory setting prior to enrollment in the program.

Level I, a fifteen credit hour course, focuses on the biological, psychological, and sociological behaviors of the individual as indicators of his levels of wellness. Clients selected for clinical experience need minimal assistance in providing for and seeking health care. Classroom content includes the concept of wellness, nursing process, scientific methods of inquiry, communication, holistic man, health-illness, teaching-learning, leadership-management, and physical assessment.

The nursing process is used with four individual clients during Level I. Clients are selected by the student based on developmental levels, level of wellness, and level/student clinical objectives. Guidelines for nursing processes and client selection are provided for each student. Student selection of clients is based on the experiences necessary to meet objectives.

A teaching-learning project which extends throughout the four levels is initiated on Level I. Each student selects an area in which he can develop and present a teaching plan to meet an identified learning need of health care consumers, providers, and/or the community. Development on Level I focuses on the background of the problem, the problem statement, review of literature and purposes of the project.

Seven credit hours of the Level I course are obtained through independent study. The nursing skills assessment, N.L.N. Basic Pharmacology examination and a professionalism paper constitute the independent study credit.

Level II, a twelve credit hour course, focuses on care of selected clients and families experiencing minor disruptions in their health status. Clients selected for clinical experience require assistance in seeking health care and require deliberative nursing intervention in regaining healthy living patterns. Classroom content focuses on the concepts of family dynamics and assessment, mobility, ventilation and perfusion, fluid and electrolyte balance, cell aberration, and maladaptive behaviors.

The nursing process is used with three individual clients/families during Level II. Clients are selected by the student based on developmental levels, concepts presented on the level, need for nursing intervention and level/student objectives. Each nursing process includes family assessment data and uses nursing literature pertinent to the concepts being developed.

Development of the teaching-learning project on Level II focuses on the teaching-learning content area, philosophy of teaching-learning to be used in development and presentation of the project, and the scope of the project. Plans for implementation and evaluation of the teaching-learning project are identified.

Level III, a twelve credit hour course, focuses on the care of selected individuals, families, and groups experiencing major alterations in their health status. Clients selected for clinical experience have limited ability or total dependence in decision-making in regard to seeking health care, and require deliberative nursing intervention to sustain life or promote a comfortable death. Classroom content focuses on the concepts of responses to illness, high-risk mothers and infants, major psychological disturbances, oncology, burns and traumatic injuries, major health

problems, and research and the nursing process. The nursing process is used with four individual clients/families during Level III. Clients are selected by the student based on developmental levels, concepts presented on the level, need for nursing intervention, and level/student objectives. Family assessment data and nursing literature relevant to the concepts being developed are included in each nursing process.

The focus of the teaching-learning project on Level III is on the presentation of the project. Design of the project, procedures used to present the project, data collection and recording, and plans for data analysis are developed.

Level IV, a twelve credit hour course, focuses on interdisciplinary approaches to health care and on leadership, management, and innovative nursing roles. Clients selected for clinical experience are dependent upon interaction of health professionals to promote or regain their former health status. Classroom content focuses on therapeutic intervention with parents and children, role of the community and community health nurse in comprehensive health care, evaluation, leadership and management in nursing, expanding role of the nurse, and value systems in nursing, health care delivery, and societal issues. The nursing process is used with three clients during Level IV. Clients are selected by the student based on developmental levels, concepts presented on the level, need for nursing intervention, and level/student objectives. Family assessment data, community assessment data, and nursing literature relevant to the concepts being developed are included in each nursing process.

The focus of the teaching-learning project on Level IV is on the findings and evaluation of the project. Data analysis is done, findings are interpreted, conclusions drawn, and recommendations for further implementation of the project are made.

A clinical leadership-management experience is required of each student in this level. The objectives focus on the process of decision-making, leadership styles, and role and function of the leader. The change proposal, a formal paper, is designed to allow the student to select a situation for change and develop a plan to implement change in a health care delivery system.

Faculty-student conferences are held each week throughout the four levels. Student objectives to be achieved in the classroom and clinical areas, nursing processes, and student progress are discussed and evaluated in the conferences. Conference time is arranged on an individual basis by the faculty advisor and the students.

Students are provided with study modules including objectives, study questions, and a bibliography one week prior to the presentation of classroom content. Testing is done on a weekly basis, and a comprehensive final is given at the end of Levels I, II, III, and IV.

The Individualized Plan for Evaluation is a comprehensive program in which the student uses independent study and self-direction to achieve objectives. Students participating in the program need to be able to function independently and need to be motivated to achieve their objectives and goals.

Statement of the Purpose and Research Questions

The purpose of this evaluation study will be to determine the effectiveness of the Individualized Plan for Evaluation in effecting change in the participants' (registered nurses) skills, knowledge, and behaviors at the conclusion of the course of study. To do so, the following research questions were formulated:

1. Is there a significant difference between the reading level of the experimental group and that of the control groups?
2. Is there a significant difference between the critical thinking measurement of the experimental group and that of the control groups?
3. Is there a significant difference between the experimental and the control groups' level of performance on the nursing simulation measurement?
4. Is there a significant difference between the experimental group and the control groups' level of achievement on the N.L.N. Community Health Nursing and Medical-Surgical Nursing Achievement Tests?
5. Is there a significant difference between the attitudes of the experimental group and those of the control groups?
6. Is there a significant change in the attitudes of the experimental group and the BNC group at the completion of their course of study?
7. Is there a significant change in the critical thinking measurement of the experimental group and the BNC group at the completion of their course of study?
8. Is there a significant change in the reading level of the experimental group and the BNC group at the completion of their course of study?

Subjects to be Studied

The subjects of this study will be registered nurses (RNs) who have completed Associate Degree or Diploma School of Nursing curriculums, have passed their state board examinations and enrolled in the baccalaureate nursing program. The RNs will be divided into four sub-groups for this study. The first two groups will be formed according to their educational preparation. The two groups will then be classified and divided further according to the number of years of work experience. These four RN groups will serve as the experimental group:

ADN5 Associate Degree Nurses with up to five years' professional experience
ADN6 Associate Degree Nurses with more than five years' professional experience
DN5 Diploma Nurses with up to five years' professional experience
DN6 Diploma Nurses with more than five years' professional experience

The two control groups will be constituted as follows:

RNC - A group of Associate Degree and Diploma graduates who meet the same criteria as the RNs in the experimental group but who have not enrolled in the baccalaureate degree nursing program will serve as one control group.

BNC - A group of nursing students enrolled in the upper division baccalaureate degree nursing program will be asked to volunteer and participate as the second control group.

Measurements

The following have been identified as pre- and post-test measures for this study:

1. The Health Care Professional Attitudes Survey (Stone)
2. The Watson-Glaser Critical Thinking Measurement (Watson and Glaser, 1972)
3. The Nelson-Denny Reading Level Measurement (Nelson, Denny and Brown, 1953)

Three additional post-test measures have been identified:

1. National League for Nursing Achievement Test (N.L.N.)
   a. Community Health Nursing
   b. Medical-Surgical Nursing

   Note: The above achievement tests are for baccalaureate degree programs only.

2. Nursing Performance Simulation Instrument (NPSI) (Gover, 1972; Gover Abstact)

Data Collection

The following procedure for data collection has been developed.

1. The RNs enrolled in the Individualized Plan for Evaluation program and the nursing students enrolled in the baccalaureate degree nursing program will be pre-tested upon entry into their respective programs. The RN control group will be administered the same pre-tests sometime during the same academic semester as the experimental group and the BNC group.

2. Prior to completion of the respective programs by the participants (RN and BNC groups), post-test measures on the Health Care Professional Attitudes Survey, Watson-Glaser Critical Thinking Measurement, and the Nelson-Denny Reading Level Measurement will be given to all participants in the experimental group and BNC group. The three additional post-test measurements will be administered to the experimental group and the BNC group at the end of their course of study. The RNC group will also be given the three additional post-test measurements.

The following time table has been determined for data collection.

1. Spring 1980
   a. Pre-test experimental and BNC groups during the month of January.
   b. Administer the battery of pre-test to the RNC group during the months of February and March.
2. Fall 1980
   a. Post-test experimental group during the months of November and December.
   b. Administer the three additional post-test measurements to the RNC group during the months of November and December.
3. Spring 1981
   a. Post-test the BNC group during the months of April and May.
   b. Tabulate and analyze the data collected during the month of June.

Limitations of Study

There will be a major curriculum revision in the generic baccalaureate degree nursing program beginning with the spring 1980 semester. This change requires the use of nursing students admitted to the generic program in the fall 1979 semester as the BNC group for this study. These students have already taken the Nelson-Denny Reading Test, leaving the two remaining pre-tests to be accomplished during the month of January, 1980.

Approval from the University Human Research Review Committee (HRRC) to use the nursing students and registered nurses in the community as subjects for this evaluation project caused a delay in identifying the subjects in the experimental, BNC, and RNC groups. Therefore, the BNC group will have completed one level of the nursing curriculum before the total battery of pre-tests can be administered.

Analysis of Data

The data collected for this study will be analyzed as follows:

1. Each participant's (experimental and BNC groups) pre-and post-test scores will be analyzed by percent correct response.

2. The t-test will be used to analyze the difference between the (1) experimental group and BNC group, and (2) experimental group and RNC group on all pre-test measurements.

3. The t-test will be used to analyze the difference between the experimental and BNC groups on all post-test measurements. This includes the three additional measurements used at the end of the course of study.

4. The t-test will be used to analyze the difference between the experimental and RNC groups on the three additional measurements used at the end of the course of study for the experimental group.

5. The chi-square will be used to analyze any significant difference(s) within the experimental group on the pre- and post-test measurements used in this study. This includes the three additional measurements used at the end of the course of study.

Conclusions

Conclusions will be drawn from the analysis of the data and recommendations cited regarding the effectiveness of the alternative route for RNs enrolled in the upper division baccalaureate degree nursing program.

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A COMPREHENSIVE EVALUATION: MEASURING PRODUCT AND PROCESS

Marilyn-Lu Jacobsen

Everybody is doing it! Evaluation of all sorts has become a national mania and for good reason--the age of accountability has arrived and is predicted to be well and strong in this new decade.

Although educational evaluation had led the way, the field of evaluation is still in its infancy. The literature abounds with evaluation strategies for determining the worth of everything. The variety reminds me of a flower garden (complete with hybrids and mutants). Everything is fair game--projects, programs, curriculum; products and services; teaching, learning and the environment, the methods and processes; tools of all sorts; students, faculties, deans, settings, resources, outcomes, and there is even a meta evaluation--that is, evaluating the evaluation (Stufflebeam, 1978, p. 17-40).

And then there are the models--Green and Stone (1977, p. 36) propose that models should tell what ought to be done. These support the garden like rain and fertilizer. The verbal bouquet has a familiar ring: CIPP, Goal Free, Transactional, Adversary, Behavioral Objective, Discrepancy, System Analysis.

Popham warns the gardner of the possibility of mutations for, and I quote, "the proclivity (of evaluators) to model muddling" (Popham, 1974, p. 2). Lewy warns of the hybrid, which is not generalizeable and may even be incomplete (1977, p. 37).

The methodology needed to support the model is the design or the "how to." You've heard it before: random sampling; multitrait, multimethod; Delphi; matched sample, control groups, task analysis, etc.

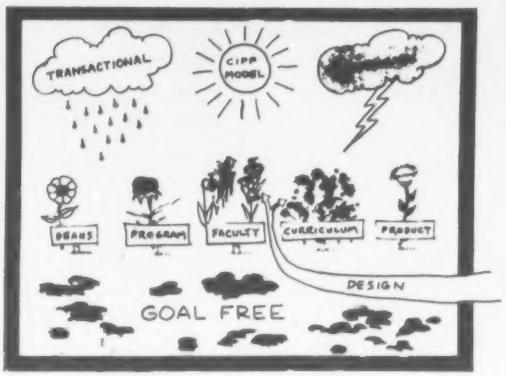

Figure 1.

The resulting arrangement may be so confusing that the well-intentioned novice evaluator may leave with a headache. Rather than take two aspirin and forget the evaluation mania, this writer has chosen to pick selectively from the garden. My objective in this presentation is to identify the flower, the element we've chosen to make the flower grow, how we've planted and cultivated and then, framed the result; that is, the evaluation who, what, where and how of the baccalaureate program for RNs at this University.

Let's begin by establishing the setting. The evaluation project to be described has been

established for the College of Nursing at the University of Kentucky, in the heart of the Bluegrass. The Commonwealth is a combination of ruggedly rural mountain communities and cosmopolitan cities. The needs of the health care delivery systems are as varied as its geography.

The College of Nursing phased out the generic baccalaureate nursing programs in 1979 with the inception of the baccalaureate program for RNs. In December 1979, the program was re-accredited by the NLN for eight years.

Next, let me tell you of our process of building the evaluation project. First, the five P's of evaluation were identified:

the Philosophy of evaluation held by my employer,
the Purpose of the evaluation,
the Persons addressed,
the Politics of the setting and the role of
the Professional/Scientist as evaluator.

Philosophy

Since this evaluation is sought and defined by the Administration of the College of Nursing, consultation with the Dean was sought and an advisory committee consisting of five researchers and evaluators from outside of the College of Nursing and several faculty members was established.

The momentum for implementation was based in the belief that RN-BS education is an innovation; an innovation is a dynamic process which requires evaluation at all phases with continuous monitoring and feedback. The project is directed by the philosophical doctrines of realistic idealism (Zinzer, 1978, p. 84). The dual concepts allow both objective data to be collected (the realistic portion) and people's perceptions to be sought (which is the principal variable of idealism).

Purpose - Persons - Politics - Professional

It was determined that the primary purpose for which data were to be collected would be in order to inform and enhance the decision-making process for both the faculty and the administration. Relevant segments of the data will also be shared with other interested parties. Value judgments will be determined by those receiving the report. This was proposed to reduce the potential threat to faculty. The administration has taken a clear stand on its role in the evaluative process. That role is to determine program outcomes. Hence "course" and "curriculum" evaluation, both specific prerogatives of the faculty, have not been included. Another important consideration was the remoteness of the evaluator from the curriculum itself. The decision to appoint, as principal investigator, a person who is not directly involved with the educational program helps to minimize assumptions, boost objectivity and assure our respondents that confidentiality is a fact.

The desired result is that trustworthy, constructive and scientifically sound data are produced to answer worthy questions. Of course, all of this is not without pain. Despite the national focus on evaluation, faculty and administration are not wildly enthusiastic about evaluation of any sort. I understand that the history of the evaluation might well be traced

to King George III who granted a coat of arms to the royal evaluator--it featured crossed purposes on a field of black and blue. As you can see, nothing much has been changed!

Research Questions

The evaluation project at the University of Kentucky was designed to try to answer some of the questions that are currently being asked by the profession, employers, nurse educators, and even the congress:

1. What nursing skills are needed in the real world of the '80's?
2. Is the Second Step graduate better able to meet the needs of the health care delivery system? Does he/she have the competencies?
3. Is there greater satisfaction with the Second Step graduate?
4. Does this program provide preparation adequate for nursing roles?
5. What are the barriers to professional practice?
6. Can attitudes be changed? Is resocialization and role change a developmental sequence?
7. Who should be admitted?

These were not the only questions raised--there were other more pragmatic ones which suggested four methods: (1) the Cosmetic Method (How do we make the new program look good?); (2) the Cardiac Method (We know in our heart the new program is a good one, even without or despite data.); (3) the Colloquial Method (The curriculum committee decided the program was good.); and (4) the Cash Method (Some agency came up with the money; therefore, the program is worth using--until the money runs out.). However, despite the human impulse to follow one of those methods above, the esoteric notions prevailed.

Three areas are addressed in the study: (1) the product of the program; (2) the process (specifically, to determine if attitudes change, and to build a theory for the resocialization process); and (3) to determine admission criteria. Hence, our logo Sleuthing Nursing Pathways, attempts to capture the essence of the research. The CIPP Model, which is one of the best known decision facilitation evaluation models (Popham, 1974, p. 33), builds the framework for the strategies which will be utilized.[1]

Program Outcomes Evaluation

The program outcomes evaluation component may produce the most intriguing results, partly because of the methodologies used: a task analysis, a satisfaction scale to be completed by graduates and by employers (administrator and direct supervisor), and a measure of college outcomes (COMP) described more fully on page 100.

A matched sample will also be sought. The "match" is a new generic baccalaureate graduate working in the same setting as the graduate from the University of Kentucky's Second Step program. The tasks performed will be compared with a baseline data collection. The null hypothesis is that there is no significant difference in tasks performed by the two groups of baccalaureate graduates. The results of the task analysis, when correlated with the satisfaction scale supplied by employer and graduate, are expected to yield the answers to ten specific research questions related to educational preparation, the reality of the work domain, competencies, and the comparison of generic and Second Step graduates on each variable.

Figure 2.

Our analysis will make use of the Comprehensive Data Analysis Program (CODAP) which was developed for task analysis studies by the Air Force. This program will rank each functional area and each task in each health care agency. The most significant variables for our purposes will be those which deal with the degree of preparation nurses feel they have received for the actual jobs they are asked to perform. This information will enable us to determine whether or not differences exist in the level of preparation among nurses from different educational backgrounds (nursing program types and educational institutions).

The nurses' perceptions of the importance of the various tasks will be subjected to analysis of variance to determine if there are differences among settings and by graduates of the different programs. A Scheffé test will be used to determine whether or not differences exist within the setting.

Using the Statistical Analysis Systems Package (SAS), we will determine whether or not significant differences exist between the following groups: (1) nurses who worked in large health care agencies vs. those who worked in small health care agencies; (2) those who worked in small communities vs. those in large communities; (3) nurses with more experience vs. those with less experience; and (4) nurses who worked full time compared with nurses who worked part-time.

Process Evaluation

Nursing Education literature reports a number of studies that have been undertaken to assess the effectiveness of the professional socialization process on student nurses during their educational program. However, contradictory findings have resulted from these studies. In our study, the measurement of attitude changes and the building of a developmental hierarchy in the resocialization process will be attempted. Since the student population in the RN-BS program has had work experience and has been previously socialized as "technical" (Montag, 1951), and since the literature is devoid of any study which attempts to identify the stages or process of the resocialization process, a study of the "light bulb phenomena" seems cogent to the issues in the Second Step educational process.

The design includes both an opinion survey (for attitude change assessment) and a model which was designed to identify stages and build the developmental hierarchy. Multimethod, multisource data are utilized to document, at six-month intervals, the developmental changes (that is, if there are any) and in what direction they occur in the process of change from technical to professional. Evaluation data developed using the model indicate when, during a program, the students were able (or unable) to advance to a higher stage of development. This information about the moment of advance has important implications for instructional design and the formation of a theory about the process from "technical" to "professional." The implications are that the amount and type of instruction necessary to bring each student to a theoretically expected performance level (developmental stage) can be ascertained directly using the data provided by the EMDG (Evaluation Model for Developmental Growth). These data will be analyzed by using the Markov chain analysis procedures which have been refined for the explicit purpose of the developmental model. The construct validity of the opinion survey will be assessed by the method of multitrait-multimethod factor analysis.

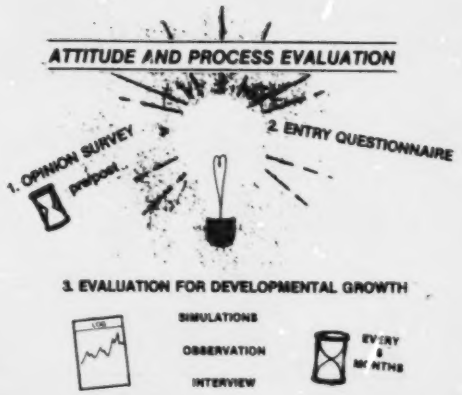

Figure 3.

Traditional evaluation paradigms have tied the evaluator to measurement data that is objective and fits an interval scale. Traditional methods do not allow subjective and objective data to be combined and analyzed together. The EMDG allows data from many sources (such as critical incident logs, objective tests, subjective rating scales, and expert opinions) to be combined and used to measure student progress in an educational program.

Many of the procedures described above have not been employed by evaluators in the past because of their newness to evaluation methodology. These new techniques represent powerful tools to aid evaluators and collectively form a model for evaluation which appropriately analyzes the multifaceted outcomes of the program. This approach differs from the usual type of evaluation where multiple outcomes are analyzed individually, resulting not only in the violation of many statistical assumptions, but providing information which may be inaccurate to those in decision-making positions.

Admission Component

Some nursing educators feel strongly that there must be a strong liberal arts base for successful performance as a professional. Research on learning, however, shows that the adult learner, given a general level of ability (Madaus, et al., 1973, p. 253-262), does not need to learn in a hierarchial sequence, but can achieve higher levels of cognitive functioning whenever presented with appropriate materials. Wing and Wallach (1971) point to the need to predict success, not in academia but in the real world. They suggest a relationship between competitive activity and subsequent career success.

Since we are dealing with adult learners and since we value performance in the work setting, we looked for an instrument that would predict and measure the skills needed for work setting success. According to the American College Testing Program, the skills needed are communicating, problem solving, clarifying values, using science and technology, and using the arts. The test they developed, and which we have selected for our study, is called the College Outcomes Measures Project (COMP) Its purpose is to go beyond evaluation of academic achievement, to measure how well students apply what they've studied, and to determine if they have the skills needed to function effectively in adult society. (Chronicle of Higher Education, October 23, 1978, p. 6.) That is, COMP measures the qualities developed by the college experience--not a specific course. It is used in a pre-test, post-test design.

Our analysis will make use of descriptive statistical techniques such as means and standard deviations. An inter-correlation matrix will be utilized to scan the data from six tools: COMP, follow-up of withdrawals, previous achievements, statements, task analysis, the satisfaction scale, and some questions from the Entry Questionnaire. Multiple regression will then be utilized.

Data from generic baccalaureate nursing programs utilizing COMP which will be provided by ACT, will also be added to the matrix.

Methodological Concerns

The quest for more comprehensive and useful evaluation has produced a new field--the field of evaluation research (Rossi, 1979, p. 15). Here, there is robust activity devoted to collecting, analyzing, and interpreting information needed to improve the quality of life. The methodology of evaluation research includes the rigors of systematic research, when appropriate, while the scope of areas to be evaluated is comprehensive and all inclusive. It is broader than research but necessitates the skills of a highly educated researcher. The end product is valid data which combines objective and subjective data points.

As researchers, we are haunted by the nagging questions about bias, validity, and reliability. I've briefly summarized some of the major methods of controlling each: Bias has been controlled through the use of personnel from outside the College of Nursing's faculty to conduct the project; use of consultants from within and from outside U.K.; subcontracting the data analysis to a biostatistician with no vested interests; use of a stratified random sampling technique to insure the inclusion of various types of agencies and geographic settings; a vigorous plan to follow up on non-respondents; and the meta evaluation by the select advisory committee.

We have not attempted to reinvent the wheel; thus, we plan to use developed instruments where ever possible. This policy has led to a plan for data-sharing between East and West coast through the use of the National Second Step Project's "Entry Questionnaire" (modified for our own computer program). We also have plans to modify a satisfaction scale and do have a check on the internal consistency of the opinion survey we developed.

Validity for the task analysis is being addressed through the use of pilot tests, jury review, faculty critique, the collection of data over time and the correlation with other instruments.

Expectations and Summary

The rewards of this evaluation will hopefully be to:

1. Yield data on which to build recommendations for improving the product--incoming and outgoing.
2. Identify process of attitude change and build a theory of resocialization.
3. Identify goodness of fit between the health care delivery system and the educational preparation of RNs--generic? RN-BS?
4. Bring faculty and employers together to examine common concerns.
5. Change the environment of the work domain.
6. Change views of inservice education needs.
7. Help students choose among programs.
8. Encourage students and others to view learning objectively.
9. Promote scientific perspective on evaluation efforts.
10. Produce evaluation which is replicable.

Have you heard the definition of a group of evaluators? It's similar to those of animals: gaggle of geese, pride of lions, flock of ducks. That is, a group of evaluators is called a hassle! Perhaps, we, too, will deserve that reputation since the criticism has been made that we are promising a great deal.

In summary, the evaluation research project at the University of Kentucky utilizes the CIPP paradigm as a framework, is composed of three parts: product impact evaluation, process evaluation (which consists of attitude assessment and resocialization theory development) and admissions criteria development. Hopefully the real work and excitement will start in the fall of 1980 with preliminary data in 1981. If the funding does not materialize, we have a back-up logo which will denote the Bare Bones Research Project. In any case, however, we hope to accomplish a great deal through the research that we have proposed and briefly presented. Eventually, we hope to share our findings with you.

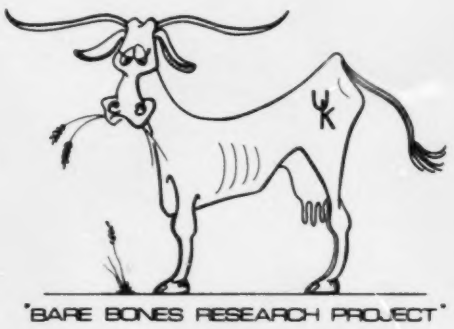

Figure 4.

FOOTNOTE

1. As codified by Stufflebeam and Guba, the CIPP Model combines Context, Input, Process and Product, suggesting a comprehensive evaluation design. Since the U.K. program has already been implemented, the last "I" and "P's" (the input, process and product portion) of the model will be utilized with "context" playing a role in the background of the evaluation project itself.

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RESEARCH PERSPECTIVES ON STUDENT ENTRY AND PLACEMENT

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Validity of NLN and CPE Tests for Incoming Student Assessment

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Simulation Assessment of Clinical Competence

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VALIDITY OF NLN AND CPE TESTS FOR INCOMING STUDENT ASSESSMENT

Susan Leddy

A number of us have a common problem. Since our programs are built upon prior knowledge and skill, it is essential for us to be able to validate that entering students possess the expected competencies. Many programs with an upper division major in Nursing for registered nurses use a battery of either National League for Nursing Achievement Examinations or College Proficiency Examinations from the New York State Education Department to validate theoretical knowledge. Since these examinations were developed for other purposes, our faculty asked the question, "Are NLN or CPE examinations valid tools to measure attainment of the Mercy College entry objectives?"

The Nursing program at Mercy College is an upper division major which has been designed for registered nurses. Students enter the upper division baccalaureate Nursing program as technically educated registered nurses with varying abilities and experiences. The students reflect individual differences in:

a. educational preparation in Nursing (e.g., they come from a wide variety of either associate degree collegiate programs or hospital-based diploma programs).
b. technical nursing practice (e.g., they demonstrate a wide variety and amount of experiences in the health care delivery system).
c. educational preparation in the liberal arts and sciences (e.g., they come with varying backgrounds in general education supportive to nursing practice).

Responsive to student differences in nursing education and practice, the faculty have believed from the beginning of the program that the strengths each student brought to the program must be validated. Through a study of the literature and knowledge of expectations of the technically prepared nurse, the faculty identified those technical elements of nursing essential to the practice of professional nursing which students should have already achieved in their lower division programs.

Those elements of lower division nursing which were determined to be aspects of professional development were established as the entry level objectives for the upper division program. Thus, the applicant successfully:

1. Plans nursing interventions to meet identified, commonly occurring problems of ill individuals.
2. Implements nursing interventions to meet identified, commonly occurring problems of ill individuals.
3. Evaluates nursing interventions to meet identified, commonly occurring problems of ill individuals.
4. Utilizes accepted alternate approaches to meet identified, commonly occurring problems of ill individuals.
5. Identifies therapeutic communication techniques.
6. Understands common diseases of individuals as one basis for nursing care.
7. Understands the effects of illness on people as one basis for nursing care.
8. Understands common therapeutic interventions as one basis for nursing care.

9. Identifies principles from the natural and behavioral sciences in planning, implementing, and evaluating nursing activities with ill clients.
10. Utilizes problem-solving approach in caring for ill individuals.
11. Identifies roles of interdisciplinary health team members.
12. Discriminates areas of responsibilities among members of the nursing team.
13. Identifies own capabilities in nursing situations and responds appropriately in client situations.
14. Identifies own limitations in nursing situations and responds appropriately in client situations.
15. Recognizes instructional needs of ill individual client for simple nursing protocols.

For the first two years of program development, the faculty used a battery of four National League for Nursing Achievement Examinations as tools for validating the entrants' understanding of theory. The NLN examinations used were Maternal-Child Health Nursing, Psychiatric Nursing and Pathophysiological Disturbances Parts I and II. In addition, they developed a simulated clinical examination to measure application of theory.

In Spring 1979, the faculty began an evaluation of the curriculum in preparation for an application for NLN accreditation. It was decided that since we were using them for that purpose, it would be desirable to demonstrate that the NLN examinations were valid tools to measure attainment of entry objectives. The faculty recognized that if the NLN examinations were found invalid for this purpose, that alternative tools would have to be used or devised. Thus, it was decided to evaluate three New York State College Proficiency Examinations in Nursing as alternative tools: Adult Nursing, Psychiatric Nursing, and Maternal-Child Nursing.

Methodology

All seven examinations were analyzed:

NLN	CPE
Psychiatric Nursing	Adult Nursing
Maternal-Child Nursing	Psychiatric Nursing
Pathophysiological Disturbances Part I	Maternal-Child Nursing
Pathophysiological Disturbances Part II	

We are fortunate to have four doctorally educated Nursing faculty with Master's clinical specialization in Psychiatric-Mental Health Nursing, Medical-Surgical Nursing, and Maternal-Child Nursing. These four faculty analyzed the examinations. I want to stress from the outset that we had not planned this project as a research study; and thus, there was no attempt to ensure inter-observer reliability.

The maternal-child Nursing clinician analyzed both the NLN and the CPE tests in Maternal-Child Nursing. The CPE in Adult Nursing and the NLN examinations on Pathophysiological Disturbances were all analyzed by the medical-surgical Nursing clinician. The NLN examination in Psychiatric Nursing was analyzed by one psychiatric-mental health Nursing clinician, while the CPE test on Psychiatric Nursing was analyzed by the other prepared faculty member.

Each examination item was separately classified in relation to the entry objectives on

the basis of the judgment of the individual investigator. These data were then collated. Table I (below) indicates the number of items in each examination that were classified for each entry objective, and the percentage of the examination represented by that number.

Table I. Distribution of CPE and NLN Items, by Objectives.

	CPE						NLN							
Objective	Adult		MCH		Psych		Patho I		Patho II		MCH		Psych	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
1	5	3	0	0	12	9	11	9	20	17	3	2	8	6
2	6	4	0	0	5	4	22	18	21	17	2	2	15	12
3	0	0	1	1	14	10	5	4	5	4	0	0	5	4
4	23	16	0	0	4	3	0	0	0	0	1	1	3	2
5	1	1	1	1	6	4	0	0	0	0	4	3	11	8
6	22	15	46	35	17	12	55	46	58	48	32	25	20	15
7	22	15	8	6	17	12	20	17	10	8	6	5	27	21
8	39	27	40	30	26	18	1	1	0	0	27	21	20	15
9	25	17	33	25	39	28	0	0	0	0	34	27	7	5
10	0	0	0	0	0	0	5	4	5	4	3	2	11	8
11	0	0	1	1	0	0	0	0	2	2	2	2	1	1
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	1	6	1	1	1	1	0	0	0	0	6	5	0	0
14	0	0	1	1	0	0	0	0	0	0	0	0	2	2
15	3	2	0	0	0	0	0	0	0	0	6	5	0	0

Note: Percentages of 20% or more are underlined.

Table I demonstrates several interesting similarities between the NLN and the CPE tests. One entry objective (12) was not measured by any items on any examination. This objective is: discriminates areas of responsibility among members of the nursing team.

Eight objectives (3, 4, 5, 10, 11, 13, 14 and 15) were measured by 5% or less of the items on six of the examinations. These objectives are:

3. Evaluates nursing interventions to meet identified, commonly occurring problems of ill individuals.
4. Utilizes accepted alternate approaches to meet identified, commonly occurring problems of ill individuals.
5. Identifies therapeutic communication techniques.
10. Utilizes problem-solving approach in caring for ill individuals.
11. Identifies roles of interdisciplinary health team members.
13. Identifies own capabilities in nursing situations and responds appropriately in client situations.
14. Identifies own limitations in nursing situations and responds appropriately in client situations.
15. Recognizes instructional needs of ill individual client for simple nursing protocols.

You will also notice that the same four objectives (6, 7, 8 and 9) were the only ones by which twenty per cent or more of the items on all of the examinations were classified. I will have an additional break down of these data later in this presentation.

Table 2 (below) compares the NLNs and the CPEs in three subject areas. On Maternal-Child Nursing, while there are some differences on a number of objectives, the significance of these differences appears to be minor. On Psychiatric Nursing, you will notice that there are larger differences on several objectives--2, 3, 7, 10, and especially 9! And in the area designated roughly as Med-Surg (comparing the average of the two NLN examinations on Pathophysiological Disturbances with the CPE on Adult Nursing), there are several rather large differences: 1, 2, 4, 8, 9, and look at 6!

Table 2. Comparison of NLN and CPE Examinations in Three Content Areas.

Objective	Maternal-Child		Psychiatric		Med-Surg*	
	NLN %	CPE %	NLN %	CPE %	NLN %	CPE %
1	2	0	6	9	13	3
2	2	0	12	4	18	4
3	0	1	4	10	4	0
4	1	0	2	3	0	16
5	3	1	8	4	0	1
6	25	35	15	12	46	15
7	5	6	21	12	13	15
8	21	30	15	18	1	27
9	27	25	5	28	0	17
10	2	0	8	0	4	0
11	2	1	1	0	1	0
12	0	0	0	0	0	0
13	5	1	0	1	0	6
14	0	1	2	0	0	0
15	5	0	0	0	0	2

*Average of the two NLN tests on Pathophysiological Disturbances with the CPE test on Adult Nursing.

In Table 3 (on next page), all of the examinations were compared in relation to two groupings of the entry objectives, the "Nursing Process" objectives, and the "Disease Oriented" objectives. The first part of this table shows the relationship for objectives 1, 2 and 3, and then compares the total percentages of the test items which were classified as being related to "Nursing Process." The column which is labeled Mercy gives the percentages of an examination which the faculty had blueprinted as desirable. From one to thirty-five percent of the standardized test items were classified as "Nursing Process" oriented. The CPE on MCH is especially low (1%) when compared with the Mercy College blueprint (30%), while the NLNs in Pathophysiologic Disturbances are even higher (35%) than blueprinted.

The second part of Table 3 compares the examinations in relation to the "Disease Oriented" objectives. First each objective is analyzed separately, and then the total percentage

is shown. From fifty-six to ninety-six percent of the test items on all the standardized examinations were classified as "Disease Oriented." In comparison, the Mercy College faculty blueprinted this area for 27% of an examination.

Table 3. Comparisons on Two Groups of Objectives: Nursing Process and Disease Oriented

	MCH		Psych		Med-Surg		Mercy
	NLN	CPE	NLN	CPE	NLN	CPE	
Objectives	%	%	%	%	%	%	%
Nursing Process:							
1. Plans	2	0	6	9	13	3	12
2. Implements	2	0	12	4	18	4	12
3. Evaluates	0	1	4	10	4	0	6
Total:	4	1	22	23	35	7	30
Disease Oriented:							
6. Diseases	25	35	15	12	46	15	6
7. Effects	5	6	21	12	13	15	6
8. Interventions	21	30	15	18	1	27	6
9. Science principles	27	25	5	28	0	17	9
Total:	78	96	56	70	60	74	27

Discussion

I want to stress again the limitations of the study. One investigator analyzed each examination using her own judgment for classifying the items. There were four investigators. Thus, the reliability of the data has not been determined. In addition, the objectives used for the classifications have not been validated. Because of these limitations, generalizations cannot be made.

However, this exploratory project has developed some interesting data. It appears that the majority of the test items on all of the examinations are oriented toward diseases and their treatment. In fact, practically all (96%) of the test items on the CPE on Maternal-Child Nursing were classified in this area. Nursing Process test items comprise a relatively small proportion of the examinations.

While the CPE's and the NLN examinations have similarities in composition, they appear to have major differences, and probably should not be used interchangeably.

The Nursing faculty at Mercy College decided that neither the NLN nor the CPE tests were valid to measure achievement of our objectives. A Departmental Nursing examination was developed. The theory portion of the examination integrates all specialty areas of Nursing. There are 170 items. The examination has been administered to fifty applicants and the results subjected to computer item analysis.

Should each program develop a separate examination? I think this approach would be an undesirable duplication of time and effort in an area in which a number of us lack sophistication. I cannot believe that our entry objectives are so different that we need a different examination for each program. I personally support the concept of a nationally standardized theory examination. An individual program might add other tools if they are deemed necessary. Therefore, I would like to recommend the following:

1. Entry objectives from a large number of Second Step programs should be collected and collated. A master list of objectives which are common to most programs should be developed and agreed upon by the participating schools.

2. The NLN Achievement Examinations and CPE Nursing Tests should be reanalyzed in relation to the master list of objectives, with a measurement of inter-rater reliability built into the analysis.

3. If the examinations do not test the master objectives adequately, these findings should be shared with the test developers at the National League for Nursing and the New York State Education Department. Hopefully, they would consider modifying existing examinations or possibly developing a different form which could be used by a large number of schools.

4. Another option would be a collaborative effort to develop and standardize an alternative examination that would meet the collective needs of a number of programs. Existing examinations could be evaluated in a number of schools, or a new examination could be developed collaboratively.

Conclusions

In summary, seven nationally standardized NLN and CPE Nursing examinations were analyzed in relation to the entry objectives developed by one baccalaureate program in Nursing for registered nurses. At least 50% of the test items on all examinations were related to diseases and their treatment. The number of test items related to the nursing process varied widely. Wide variations were also found among tests from the same agency and between the two agencies in the same subject area.

It is recommended that the study be replicated with appropriate controls for validity and reliability. Collaboration between test development agencies and cooperating schools is suggested as a mechanism for the development of valid, reliable examinations to measure the knowledge of entering students.

SIMULATION ASSESSMENT OF CLINICAL COMPETENCE

Marion Anderson and Karen Whitmore

Receiving its impetus from the American Nurses' Association's thrust to support increased access to career mobility, (Nichols, 1979, p. 14) Southern Oregon State College (SOSC) developed a baccalaureate program for RNs. This NLN accredited upper-two or Second Step program was designed to give credence to the RN's prior educational and practical experience.

The profile of the candidates for this program demonstrates a variety of educational, professional, and life experiences including a varying number of years of nursing practice. To assist faculty in validating the varied backgrounds and experiences of these RN applicants, the authors developed a computerized evaluation tool. Eventually the use of this tool will enable quantitative evaluation of knowledge, understanding, and skills of professional practice (critical thinking, communication, teaching-learning, and problem solving).

The Problem

Evaluation is a concern which has plagued nurse educators for years; we continuously search for valid means to measure competencies. For our program's specific evaluative needs, we wanted a simulation technique which would supply the following: immediate feedback to students and evaluators, data accumulation, and a method of examining an applicant's rationale for why a specific nursing approach was used. As early as 1966, clinical nursing instruction via the Plato simulated laboratory was being reported in nursing literature. (Bitzer, 1966, pp. 144-150) More recently, Harriet Schneider has recognized simulation as a reliable means of looking at nursing competencies. She also acknowledges that the computer is a valid means of teaching, testing, and conducting research. (Schneider, 1979, p. 116)

Development of the Tool

The Computer Case Study Evaluation Tool is a result of a project begun in the fall of 1977, based on a computer research project developed by Dr. Todd Hoover. Through the use of a computerized evaluation instrument, Dr. Hoover demonstrated that he could assess knowledge and communication skills of students in teacher education. Drusilla Burns, our programer, adapted Hoover's program to accommodate the type of material we wanted to use in the evaluation of the returning RN student. The project was executed with the support of the Computer Center at SOSC and funded by the Campus Research Committee for winter and spring quarters in 1978.

The focus of the Computerized Case Study Evaluation Tool is on four clinical situations based on case studies devised by faculty members in the Nursing Department at SOSC. The clinical areas examined are: the care of the diabetic patient, the care of the burn patient, the care of the obstetrical patient and the care of the pediatric patient undergoing surgery. Questions were formulated for each clinical situation which examined the following:

1) understanding of the disease process
2) knowledge of physiology
3) skill of critical thinking in prioritizing nursing care measures
4) use of effective means of communication
5) the ability to recognize and utilize teaching-learning situations, and
6) problem solving abilities.

Applicants to our program were required to choose two of the situations which best represented their clinical skill and/or background. This allowed evaluating faculty to assess the applicant's understanding, knowledge and critical thinking skills in an area with which the applicant was presumably maximally familiar and therefore more confident and comfortable. Douglass and Bevis state, "Prior experiences influence present responses by providing the conditioning and context for understanding the meaning of educational stimuli." (1974, p. 35) Both evaluator and student have the opportunity to assess the level of student functioning and the potential to ground new material in previous knowledge, thus making the total educational experience more relevant to the participant's goals.

Twenty students were evaluated with this tool in 1978, providing data which formed the basis for standardization and revisions of the situations and associated teaching-learning, communication and physiological aspects. Content of Computer Case Study Evaluation Tool is based on the entry level objectives of the SOSC nursing program.

The Actual Process

An example of how problem solving is evaluated with the computer program is in the case study of a burned patient. The computer screen describes the situation of Mr. Z. who is involved in a one-truck accident with his fuel oil rig. His truck overturns on a steep grade, explodes, and he is thrown free of the truck. However, his clothing ignites and he is severely burned. The involvement of the nurse/applicant is enhanced by details of the situation which include religious and ethnic background of the patient, in addition to descriptions of the appearance and injuries of Mr. Z. and the amount of surface area burned. The computer screen indicates the following: (Anderson and Whitmore, 1979)

> A passing motorist summoned an ambulance, and Mr. Z. was on his way to the nearest hospital, even before the fire trucks arrived at the scene of the accident.
>
> Mr. Z. arrives in the emergency room. He is conscious. His charred clothing reveals charred flesh on his right arm from his elbow to his shoulder. His clothing is muddy and charred from his neck to his right calf. His shirt front is still smoldering. His right ear and neck are cherry red, and he is moaning and holding his ear with his hand.
>
> You are the ER nurse. You have standing orders covering emergency care for burn victims. Prioritize by typing in the numbers in the order you would give nursing care.
>
> Please verbalize your name and the rationale for your care into the tape recorder.
>
> 1. Draw blood for blood gas analysis.
> 2. Begin Ringer's Lactate solution based on total body surface burned, depth of burn, and age of patient.
> 3. Insert indwelling catheter for accurate recording of I & O.
> 4. Keep NPO for possible development of paralytic ileus.

5. Obtain a brief history of the accident to determine if smoke inhalation may lead to respiratory complications.
6. Use cold water and ice to stop the burning process.

The correct answers were based on Assessment and Intervention in Emergency Nursing. (Lanros, 1978, p. 294-297)

The situation on the computer screen describes Mr. Z.'s ongoing condition in the hospital setting and gives the applicant an opportunity to respond to questions based on the patient's changing condition. An example of a question evaluating use of teaching-learning principles is as follows: (Anderson and Whitmore, 1979)

> Mr. Z.'s recovery hinges on his understanding and involvement in his treatment program. He needs to participate in a physical exercise regime to prevent contractures. He needs to ingest a high calorie, high protein diet to facilitate wound healing. He also needs to be able to recognize impending complications inherent in his debilitated condition. Indicate whether you agree or disagree with the following statements about his educational program and verbalize your name and rationale into the tape recorder.
>
> A. The nurse explains to Mr. Z. that the muscles in his right leg have been damaged. She explains the muscle action used in walking as she performs range of motion exercises on his leg to prevent atrophy of the involved muscles.
>
> 1. Agree
> 2. Disagree
>
> Please verbalize your rationale into the tape recorder.

Students respond to the questions by typing the number of their answer into the computer terminal. The computer then gives the students feedback on the percentage of previous respondents who agree with their answer. After indicating the answer on the terminal, the student must verbalize the rationale for the chosen answer into the tape recorder. This again is a means of evaluating depth of understanding, knowledge and critical thinking skill. After the case study is completed, the applicants devise nursing care plans where they address two problems of their choice. A faculty member evaluates the tape recorded rationale, nursing care plan, and computer data, and reviews with the student the possible outcomes of decisions made and care given. This is a method of evaluating care which could have been implemented in an actual situation. Each of the four situations requires the applicant to problem solve in a similar manner as well as to apply teaching-learning, communication, and physiological principles.

Problems and Initial Revisions

As in any new endeavor, problem areas became apparent during the course of development. These were initially defined during the first phase of implementation and evaluation in the spring of 1978.

1. The evaluation process itself was defined as threatening by returning RN students who were unfamiliar with evaluation as an educational component.
2. Anxiety with the use of the computer terminal and tape recorder was acknowledged by RN students and faculty who participated in the original test.
   a. They objected to the lighting of the terminal screen, the screen changes, and the inability to refer back to previously presented data.

b. Verbalization of rationale into the tape recorder also created anxiety which was defined by the participants and was apparent in reviewing the tapes.

3. Participant feedback indicated that some of the original instructions were confusing. During the administration of the test, a proctor was present to answer questions, and the total time involved in participating in the test depended on the questions asked and the amount of time it took to clarify the instructions. Questions were concerned with using the terminal; input from the computer as to errors in the way that data were entered or the amount of time an answer was requiring; using the tape recorder; and progressing from one section of the test to the next.

4. The authors had anticipated that the questions might be too difficult for the returning RN students. However, we found that most respondents answered within the correct answer range. We had used multiple correct answers to a question. This necessitated much interpreting and graphing by the evaluator.

5. A means of controlling for interpretation and personal bias of the individual who evaluates the tapes was needed to effect an accurate assessment and to increase the reliability of the data interpretations.

Steps taken toward resolution of the problems began with the data analysis and revision of the original tool based on that analysis in the fall of 1978 and the spring of 1979. The following strategies were devised to improve the evaluation:

1. To alleviate student anxiety, the test for the next sample was administered early in the fall quarter, prior to the major requirements of course work. A senior nursing student, previously oriented to the computer method, was designated to act as facilitator to administer the test.

2. We clarified instructions that may have been confusing both in the pre-test instructions and in the computer program instructions.

3. Details of the case study were increased to facilitate the participant's involvement and to more realistically place the participant mentally in the clinical setting.

4. Revision of the original tool included combining multiple answers so only one combination of answers was correct. This facilitated evaluation by the computer with less interpretation by the evaluator. It also confined student response modes.

5. A feedback mechanism was added to the program. This tells the participant the size of the sample and the percentage of previous responses that were the same as the participant's response. We believe that this will decrease anxiety because the students will immediately be able to compare their own status with that of others. If the student does poorly, it may increase anxiety.

6. In the fall of 1979, the tapes will be transcribed, and the individual who evaluates the tapes will read the students' rationales. Perhaps this will decrease the opportunity of the evaluator to bias the interpretation of the taped responses.

7. Revision of the original tool also included standardization of the number of questions per situation, the degree of difficulty of the questions and the areas of skills examined for each case study.

Results and Conclusions

The tool is formulated to examine general duty hospital experiences: medical, surgical, obstetrical and pediatric areas. At present, the case study bank is inadequate to evaluate a greater variety of nursing experiences. The tool was not useful in evaluating an applicant with primarily operating room experience. Thus, we recommend an increase in the case study bank to include more areas of nursing experience. It is our belief that the areas for evaluation remain the same (knowledge, understanding and skills), and that we need to structure the tool to specifically evaluate the prior experiences of the applicant.

Though the tool was originally formulated to be a part of a series of pre-admission tools, we are having all newly admitted RN students take the Computer Case Study Evaluation Tool in order to gather data regarding its reliability and validity. At this time, reliability and validity have not been established because the sample remains small. Thirty-six students have responded to date, and the data have not been evaluated on those who participated in the testing process following the initial revisions. The Computer Case Study Evaluation Tool is used in conjunction with the Personal Orientation Inventory, NLN Natural Sciences Exam, teacher-made tests, employee evaluations and on-site Clinical Practicum. After examining the results of fall, 1979, we will determine if we need more data or if we can utilize it for pre-admission evaluation. Validity and reliability will better be determined on the basis of long-term studies of students and with the accumulation of a larger sample.

In summation, a computer evaluation tool was developed which examined a variety of clinical situations. This was an attempt to give credence to the experience and prior education of RNs returning to school for a Bachelor of Science in Nursing. Knowledge, understanding, and skills (critical thinking, communication, teaching-learning, problem solving) were examined through computer, nursing care plan, and taped verbal responses. The process of establishing validity and reliability of this tool moves ahead via continuous data gathering and comparison with a variety of other evaluation tools. It is our goal to develop, utilize, and share methodologies which will appropriately place RN students in levels of nursing education which enhance the learning and experience they bring as adult re-entry students.

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UTILIZING RESEARCH IN PROGRAM DEVELOPMENT

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Effects of Prior Nursing Experience on First-Term Performance in a Second Step Program

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EFFECTS OF PRIOR NURSING EXPERIENCE ON FIRST-TERM PERFORMANCE IN A SECOND STEP PROGRAM

Mary Elizabeth Blatchley

Faculty in Second Step nursing programs have frequently debated the advantages and disadvantages of requiring entering R.N. students to have a certain amount of nursing experience. Two points of view are often heard. Some feel that experienced students are more motivated and better able to integrate classroom learning into their practice, because they can relate that learning to real clinical work situations. Others say that young inexperienced graduates are better students, perhaps because they are still close to their basic education and have not yet picked up any "bad habits" in the working world which will need to be unlearned.

At Purdue, West Lafayette, we have had such discussions many times without reaching any real conclusions. When data from the National Second Step Project (NSSP), of which we are a part, began to be available, we saw an opportunity to obtain statistical support for one side of the argument or the other. At present, data are limited to the class which entered in September 1978. In all the six programs participating in the NSSP, a total of more than 400 students entered at that time. The number for whom we have usable data on the variables discussed in this study ranges from 312 to 353. Of these, a relatively small group (n=42) were enrolled on our own campus, and preliminary descriptive data suggested that our students appear to be different in some respects from Second Step students in the other five schools.

The Program and Its Students

We have a Two-Plus-Two organization--that is, we have both an upper and a lower division and award associate as well as baccalaureate degrees. Most (62%) of the students in our NSSP sample (who are upper division by definition) come directly from our own lower division program; but regardless of where they obtained their prior preparation, seven out of ten (70%) entered the upper division within one year of graduating from their basic program. As might be expected, then, our students are significantly younger (t-test, $p < .000$) than those at the other five schools; their mean age at entry is 23½, four-fifths (80%) are under 25, and very few (4%) are 40 or older. Other demographic data reveal that they are usually female (99%), white (99%) and single (79%); practically all (92%) received their prior basic nursing education in Indiana, and relatively few (10%) are from large urban environments.

Compared with other Second Step students, it is evident that our students are somewhat younger and are the most homogeneous of the six groups with respect to sex, race and marital status. They share with two other NSSP schools the fact that they have usually remained in the same area of the country where they gained their basic education. Thus, a picture emerges of a relatively inexperienced and unsophisticated group of young students who enter the upper division soon after graduation from their basic program.

The measure of general intelligence utilized by the NSSP study is the Cattell Culture Fair Intelligence Test (CFI).[1] When the means of the six schools are compared, our students are

seen to have significantly higher scores (t-test, $p < .000$). Grade-point averages of our students are also significantly higher than those in the other schools ($p < .001$). However, these findings are offset by the fact that on a measure of intellectuality, the performance of our students was the second poorest of the six schools although the difference was not statistically significant.

The instrument used to assess intellectuality was the Omnibus Personality Inventory (OPI),[2] and the specific variable referred to above is the IDC (Intellectual Disposition Categories). This is a composite measure taken from the first six scales of the OPI which measure neither intelligence, aptitude nor knowledge, but instead are directed toward interest in intellectual involvement. Thus, our students display only an average interest in learning for its own sake. Their lowest point on the IDC profile was on the scale to measure Theoretical Orientation (TO). A t-test here showed their TO scores to be significantly lower ($p < .04$) than those obtained in the other five schools. The inference is that many of our students are not drawn to abstract mathematical or scientific articles, show little interest in considering possible research results, and prefer having theory explained to them rather than working it through themselves. Looking at other scales making up the IDC, it appears that they have no particular fondness for novel or ambiguous situations, as reflected in their Complexity of Outlook (CO) score, nor for reflective thought and academic activities in general (Thinking Introversion, or TI). Their interest in artistic matters is at the same level as that of most college students.

When the scores on the entire OPI are examined, our students are seen to be well adjusted socially and emotionally and somewhat above average in need for autonomy and independence, (but not as much as students in the other NSSP schools). As mentioned above, they are not very interested in intellectual, and particularly theoretical, concerns. When asked their future plans, most listed marriage as the activity most important to them.

Thus some further dimensions may be added to the earlier picture of a young and inexperienced student group: They seem to be bright, with traditional values, and more oriented to the practical side of life than the abstract. Most, we assume, may have just recently made the transition from dependent adolescent to independent young adult.

The Study and Findings

Is there any relationship between the lack of experience which our students display and their lack of interest in the intellectual activities that many think are needed by the nurses of the future? Is experience associated with better grades? In a search for answers to these questions, we examined the data that were available at the end of their first term in the upper division.

Variables identified as most relevant for this particular inquiry were the following: age, upper-division grade point average (first term), Cattell score, IDC (composite score), Theoretical Orientation (the single scale score), and nursing work experience. Work experience was further sub-divided into out-patient, in-patient, and supervisory experience.

We hypothesized that students with more than six months of nursing work experience would have (1) higher grade point averages, (2) better scores on the IDC measure, and (3) higher

scores on the Theoretical Orientation (TO) Scale. Age at entry was used primarily as a control variable. Our students were considered alone and in comparison to the other five schools. Also, data from all six NSSP schools were examined collectively. The analysis made use of both the chi-square statistic and Pearson product-moment correlations.

The results were not what we expected. There were no significant differences in GPA between students who had worked more than six months and those who had not, either for our own student sample, in the five other schools, or when all six samples were combined. This finding continued to hold up when work experience was broken down into in-patient, out-patient, and supervisory categories. Using the total NSSP sample, there were still no significant relationships between any kind of work experience and grade point average.

When the IDC scores were examined, similar results were obtained. There were no significant differences between the scores of those who had worked more than six months and those who had not. The type of work again made no difference--in-patient, out-patient or supervisory experience were not related significantly to intellectual disposition.

Grade point averages were related to IDC scores for students in the other five schools ($p < .01$), and when all six schools were considered together ($p < .05$). Except at Purdue, West Lafayette, students with high GPAs tended to have better IDC scores.

GPA also tends to vary with age, but again our students differ from the others. In the five other schools ($p < .05$) or when all six are considered together ($p < .01$), older students tend to have lower GPAs. At Purdue, West Lafayette, students in the middle range of age (22-23 years) rank the lowest in GPA ($p < .01$). Younger students tended to have higher IDCs when all six schools were considered together ($p < .05$).

TO scores were also not related to age, to total work experience, or when in-patient or out-patient experience alone were examined. But scores of students in the six schools who entered with supervisory experience were significantly different from the others. These students tended to have scores which indicated a greater interest in theoretical concerns than other students had ($p < .05$). However, they were not significantly different in GPA, Cattell scores, or IDC.

There were other results. To no one's surprise, high Cattell scores and high GPAs tended to occur together ($p < .01$). Cattell scores and IDC scores were not significantly related, but students in the other five schools who scored high on the CFI tended also to have a higher theoretical orientation subscore ($p < .05$). Students in all six schools with greater amounts of in-patient nursing experience had significantly lower Cattell scores ($p < .05$). Also, younger people (who are also those with less work experience) tended to have higher Cattell scores ($p < .05$).

Such preliminary data may have implications for us, although these will need to be confirmed by further study as these Fall '78 entrants finish their programs and data on the next class begins coming in. It appears that grade point average in the first semester and a disposition toward intellectual concerns are not related to work experience or the lack of it. However,

we do not yet know if this will remain true as students move through the program. It is possible the older more experienced students, who by definition are further away from their basic education and the study habits of their youth, require more than one semester to reestablish those habits. We need to observe what happens to their grade point averages as they progress. Their IDC scores may also change. Are experienced nurses better able to relate new and broader concepts to their past experience, and thus able to appreciate intellectual concerns more than their less experienced classmates? The finding that supervisors have a greater theoretical orientation than others provides some support for this idea.

In this same vein, why do our 22- and 23-year-old students have relatively lower grade point averages? Could it be that the very youngest group of students (aged 20 and 21) do better because they are still close to effective study habits, and that older students do better because of experience and motivation, while the middle group is somewhere in between and has the advantages of neither?

Finally, it may be that the differences we sometimes think we observe between experienced and inexperienced students are not being measured by the variables used in this study. Perhaps measures of independence vs. dependence, or of some other variables, would be more useful to employ as the NSSP continues. In any case, the questions raised here are worthy of further consideration if it is true, as many believe, that nursing needs practitioners who are competent with ideas as well as procedures as we continue to grow as a profession.

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INDIVIDUALIZED INSTRUCTION

Jane Garvey

Individualization of instruction, along with educational concern for individual differences, has been mentioned in the literature through the years since the time of Plato. Periods of high concern as well as periods of relative disinterest are evident throughout the history of education. Yet it is still a controversial concept. Today, when competencies are stressed and when educational institutions are accused of failing in their mission to prepare graduates for the job market, individualization is viewed by some as an extreme, impossible-to-achieve and costly objective. Interpreted in different ways by different people, it is not a clearly defined concept. In this presentation, I propose an understanding of this concept with particular application to nursing education.

Since the 1960's, coinciding with the rapid development of non-traditional educational programs, there has been a revitalized interest in individualization of instruction. The University Without Walls in 1964 was followed by many innovative programs including the New York Regents External Degree in 1970. We are more familiar with this program because it offers associate and baccalaureate degrees in nursing. But it is just one of many educational undertakings to provide programs of study that address the needs and interests of the learner. Traditional educational institutions as a whole have not been receptive to these newer programs, and this has deterred the examination of the inherent value in such an approach. What is individualization of instruction? According to Madeline Hunter, it is the greatest boon and the greatest boondoggle of the last decade.[1] The boon aspects are consistent with the dream of American education, i.e., to provide through curriculum and instruction a means by which the individual can realize his own full potential. The boondoggle aspects suggest a loose curricular structure and instructional process, opposed to the attainment of minimum competencies, opposed to standardization of instruction.

Standardization in Nursing Education

To better understand how this relates to nursing education, let me first provide a historical perspective to the evolution of nursing education in terms of standardized practices.

Schools of nursing in the United States in the late nineteenth century lacked guidelines as to what constituted a sound curriculum. The theory and experience needed for safe practice had not been clearly defined. Each school independently determined a program of study, many of which were considered unsound and a threat to the provision of quality care. Resolution of the problem necessitated educational reforms. Many influential nursing leaders believed a standard curriculum offered a solution. Programs of study in addition to the basic nursing programs were designed for teachers and superintendents as a means of promoting quality and uniformity, and for many these words were synonymous. The first attempt at such a program was initiated at Teachers College, Columbia University in 1899.

The period from 1913 to 1933 was a period of "standard setting and stock-taking" in nursing

education. The qualifications of a good curriculum were identified and professionally endorsed in 1917. The period of standardization gained direction from this curriculum, its revised form in 1927 and the findings of the Goldmark Report.[2]

The Committee on the Grading of Nursing Schools also supported the movement toward a standard curriculum. A national survey of schools of nursing was conducted. Reports were published and widely distributed among the participating schools. Pressure to improve training programs and movement toward the recommended standards was expected to occur as a result of the grading. In addition, the grading was directly responsible for the closing of many programs. This was not viewed as a disadvantage, as the Goldmark Report had recommended fewer schools of better quality.

Standardization was supported and enforced by internal professional measures and external state mandates. The mechanism of enforcement was provided by two accreditation systems. (1) Professional accreditation was developed in 1939. The League of Nursing Education completed on-site visits to schools over a two-year period on a voluntary basis, and in 1941 seventy schools were recognized as accredited. (2) External control was maintained by the state through two mechanisms. Each state established a board of nurse examiners within the State Education Department. This board granted state accreditation to schools of nursing which had been inspected and approved. It also controlled and granted the license to practice. Graduates of approved programs were eligible for admission to the State Board Examinations.

State licensure of nurses was first adopted in North Carolina in 1903. Other states proceeded to establish licensure; and by 1923, registration was a requirement of all states. The primary function of the state licensing board was to insure safe nursing care for the citizens of the state by offering protection from unsafe and unscrupulous practitioners.

From the establishment of the earliest training programs to the present, standardization was controversial. It was criticized and resisted by some very influential nursing leaders. Florence Nightingale advocated the development of individual potential, and disapproved of a curriculum which stressed adjustment to a standard set of goals. In addressing nursing students, she stated: "We cannot put into you what is not there. We want to bring out what is there. Training is enabling you to use the means you have in yourselves."[3] Lavinia Dock was also critical of the movement toward a standard curriculum which she felt was suppressing initiative, spontaneity and individuality. It was, in her words, producing "a set of machines all in the same mold with the same ideas and habits."[4]

These viewpoints did not deter the goals of the majority. Nursing education did become more standardized and controlled through League accreditation and state approval. Standardization offered assurance to the public, the employing agency and the practicing nurse that minimum criteria had been met by graduates of accredited schools.

The establishment of a standard curriculum was interpreted narrowly by some nurse educators. This narrow interpretation produced rigidity, lack of self-initiated thinking and activity and the production of stereotyped nurses as "handmaids to the physician." Interpreted in a more general and positive sense, standardization provides a framework in which a great variety of

learning opportunities can be selected in order to prepare students with competencies for professional practice. There was a need to identify standards, objectives, skills and competencies in nursing education as in any educational program. This in itself does not require specified hours and limit experience and learning. Standardization of the nursing curriculum, however, did develop along rigid lines.

Characteristics and Components of Individualization

In the literature from 1960 to present, particular areas whereby instruction might be individualized were frequently identified as the content, the process and the pace. In all three areas, factors vital to success of individualized instruction are planning, interaction and decision-making.

Content is individualized by stressing the relationship between the subject matter and the interests of the learner. Assessment, diagnosis, prescription and evaluation facilitate awareness of student interest and needs and contribute to program design. Continuous planning is a vital component. Pre-planning, done by the teacher prior to instruction, assists in identifying the subject matter and competencies which constitute the goals of instruction. Learner involvement in planning and decision-making begins at the time of instruction and continues throughout the program.

Individualization of process requires pupil-teacher planning to identify and select various learning opportunities through which specific course objectives can be met. The ways and means to achieve desired learning goals and the method of evaluation should be cooperatively planned by teacher and learner. Growth of responsibility in decision-making is a goal of the learning process.

The pace of instruction, when individualized, is geared to both predicted and actual learning rates. Teacher and learner together tentatively plan the time allowed for completing a given learning. The actual time taken may vary, necessitating adjustment of pace both in that learning and future planning.

Individualization may or may not be present in all three areas (content, process and pace). The degree of individualization can be described on a continuum. The greater the student involvement in his own program planning, the greater the degree of individualization. The greater involvement of the students in the decision-making process, the higher the degree of individualization. The program itself must then have certain characteristics to foster an individualized approach--flexibility, availability of options and opportunities for students to interact with faculty in the planning, implementation and evaluation of the learning experiences. Furthermore, the quality of the interaction is vital to program success.

Individualization in Seven Second Step Programs

In recent years, the uniform nursing curriculum has been challenged with substantial vigor as have many educational practices. As the traditional age of university and college students has shifted to include more and more adult learners, it has become apparent that the traditional

program structure is too rigid and inflexible to attend to the diverse learning needs of this new group. In nursing, the RN students comprise the major portion of these adult learners.

Concern for this group was for years unaddressed. Recent efforts to improve baccalaureate programs for RNs, evident in the Second Step movement, exemplify individualizing instruction in that programs of study are designed for a particular group of learners with similar capabilities and goals. But although the career ladder concept fosters identification of similarities among students at the various levels, it does not necessarily take into account the uniqueness of each individual in terms of specific interests and goals.

The purpose of my study was to examine the content and conduct of baccalaureate programs for RN students as they contribute to an individualized curricular approach as identified through the literature. Within this study I defined individualization of instruction to be a program of study that utilizes the interest and goals of the student as a basis for the selection of learning experiences. I qualified this by further requiring a close working relationship between student and faculty in the planning, implementation and evaluation of the educational program.

This was my working definition, although I might note that no single definition appears to have gained wide acceptance in the general population. To some it simply means instruction designed for a group of learners with similar capabilities and goals, such as with any specialty education program. Another more controversial interpretation identifies concern for the uniqueness of a single learner.

It is easier to identify variations within programs than to characterize a program as strictly individualized or lacking individualization. The degree and emphasis on individualization of instruction spans two opposite poles between completely individualized programs to assembly-line instruction. Most instructional programs fall somewhere in between.

The goal of my study, then, was to assess the emphasis and degree of individualization of instruction in RN baccalaureate programs. The sample was comprised of the seven colleges and universities in the Western and Genesee Valley regions of the State of New York that offered the BS(N) degree and admitted registered nurses. All seven schools were accredited.

A questionnaire was formulated to provide answers to two subsidiary questions: (1) what evidence of an individualized curriculum can be identified in the sample programs? and (2) what evidence is apparent in the structure and general philosophy of these programs to support or inhibit individualized curricular design?

Questionnaires were mailed to the person responsible for RN students when known, the undergraduate chairman where appropriate or the dean of the school of nursing when these other positions were inappropriate or unknown.

Conclusions from questionnaire findings revealed that philosophical commitment to individualization of instruction was present to some extent at the overall university level in all of the sample schools. This commitment usually increased at the school of nursing level and increased still further at the level of the individual student.

Persons responsible for program planning in the sample schools identified the timing for soliciting student expression of learning expectations at an instructional level. The responsibility for soliciting such expression was usually with specific course faculty; whereas, to be truly individualized, cooperation in program planning between and among faculty is necessary. To designate responsibility at the level of specific course faculty denies cohesiveness within the program and provision for student growth in any individualized manner from one course to another.

All the schools that solicited individual student expectations kept records of these expectations, but they did not regularly use them in program planning. This denied an influence of such expectations on overall program planning. An awareness of the desirability of involving the student in program planning was evident, but practices did not support this awareness.

Formal education was a major consideration in assessing the capabilities of learners. Awareness was usually acknowledged of other sources of learning in the form of general knowledge and work experience. This awareness, according to the respondents, was used in program planning; but little evidence in the identified school of nursing practices supported this claim.

Although the conceptual complexity and faculty expectations increased to a great extent within the progress of programs in the majority of schools, the increase in learner involvement was not described as increasing proportionately.

Policies and procedures governing admission are based on demonstrated academic achievement. Half of the sample indicated that remedial work was prescribed, while half the sample stated the student was rejected when he/she failed to qualify. Work experience was not considered in four-fifths of the study sample at the time of admission, although two-thirds of the sample considered work experience as a source of learning. This suggested that once the qualifications for admission were met, attention was directed to the work experience of the learner as a possible factor to be considered in placement and program planning.

Program offerings for the RN student required that they take or challenge the entire nursing program. Challenge examinations were available for part(s) of the program in fifty percent of the sample schools.

Programs offered lend themselves to individualization of instruction in that concepts are stressed within the subject field and instructional objectives are frequently stated in behavioral terms. Two-thirds of the group expressed difficulties in stating these objectives in specific, observable and measurable terms.

Instructional practices failed to offer latitude, variety of method and involvement of the learner in the choice of learning experiences and methods of evaluation in the majority of the schools.

None of the programs was described as highly flexible. Half of the programs were described as flexible to some degree, and half were described as fixed.

Differences in the sample programs indicate that some make more choices available to the learner than others; but as a whole, the group appears to be bound to traditional practices.

Little student involvement is requested in program planning and decision making regarding learning experiences.

Findings suggest that the emphasis and degree of individualization of instruction in the sample schools may be described as greater in philosophical commitment than in practice. There appears to be an overall awareness of the educational concepts of individualization of instruction and its current popularity as evidenced in the literature. A few of the schools offer a considerable variety of method. However, limited learner involvement in program planning, selection of learning experiences, faculty-student collaboration, and choice of method of evaluation and pace leave the schools highly structured, stressing competencies to a greater extent than the adaptation of learning experiences to the needs and interests of the learner.

The following statements summarize the conclusions drawn from the questionnaire findings:

> Overall university practices continue to focus on rigid entrance requirements which can only be demonstrated in formal education, i.e., transfer credits from another college or university.
>
> All the schools of nursing in the sample study have curriculum structures which lend themselves to individualization of instruction.
>
> The structure of the sample programs included various individualized instructional practices. These practices were, however, limited in flexibility and adaptability to individual learning needs.
>
> There is little evidence to support any course adjustment for RN students other than the availability of challenge examinations.
>
> There is limited learner involvement in program planning and decision making regarding learning experiences.

Recommendations

Based on the questionnaire findings, the following recommendations are proposed whereby the university/college offering programs for the RN student may move toward a greater degree of individualization of instruction.

> That admission of RN students to the university/college be accomplished through the school of nursing.
>
> That effort be addressed at time of admission toward assessing the capabilities of the RN student in respect to desired learning outcomes.
>
> That this assessment be utilized in planning a program for the student which contributes specifically to providing minimum professional competencies within the framework of his/her career goals.
>
> That the learner be involved in program planning with a designated faculty advisor from the initial admission process through graduation.
>
> That within obvious constraints of resource allocations, the selection of various learning methods be available to the student within specific courses to increase flexibility.

In nursing education, we have a wealth of opportunities to individualize the learning experiences. From my study, I have concluded that schools of nursing in the sample are not practicing this approach to any significant degree. It would appear highly appropriate to do

so. This requires creative and imaginative teachers willing to explore alternatives with excitement and challenge, willing to plan learning experiences which will promote autonomous decision makers in a time when these qualities are necessary for nursing practice.

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